MASTER PLAN

June 1992

for MacMillan Provincial Park

BC Parks

Ministry of Environment, Lands and Parks

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MacMillan Provincial Park

MASTER PLAN

Prepared by

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MacMillan Provincial Park

Master Plan

Recommended: _____ Date: 92/04/14
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TABLE OF CONTENTS

THE MASTER PLAN

Plan Highlights 1

Introduction 2
- Plan Purpose
- Background Summary

Role of the Park 5
- Regional and Provincial Context
- Conservation Role 6
- Recreation Role

Park Zoning 8

Natural and Cultural Resource Management 11
- Introduction
- Land
- Water 14
- Vegetation 15
- Fish and Wildlife 18
- Visual Resources 19
- Cultural Resources 20

Visitor Services 21
- Introduction
- General Concept
- Access Strategy 23
- Information Strategy
- Marketing 30
- Management Services 32
- Visitor Opportunities 33

Plan Implementation 37

List of Figures

Figure 1	Park Location	3
Figure 2	Regional Setting Map	7
Figure 3	Park Zoning	9
Figure 4	Proposed Acquisition	13
Figure 5	Proposed Development Map	35

List of Plates

Plate #1	Cathedral Grove circa 1910	iii
Plate #2	Cathedral Grove's Giant Trees	4
Plate #3	Old-growth Forest of MacMillan Park	10
Plate #4	Pacific Rim Association Kiosk	26
Plate #5	MacMillan Park 1990 Blowdown	36

Appendix 1 **Background Report** 43

Appendix 2 **BC Parks System Goals** 77

Appendix 3 **BC Parks Zoning System** 79

Appendix 4 **Adjacent Land Status** 85

Appendix 5 **Public Involvement Process** 87

Plate #1. Cathedral Grove circa 1910 District 69 Historical Society Photograph

Plan Highlights

- Most of the park is zoned Natural Environment. The park's giant old-growth Douglas-fir trees and the recent blowdown are zoned Special Feature.

- BC Parks will hold discussions with MacMillan Bloedel Limited to acquire those areas essential to the park's role and to participate in land use decisions next to the park.

- A facility development program will be implemented to relocate vehicle parking and provide associated sanitary, information and picnic facilities.

- BC Parks will seek the cooperation of MacMillan Bloedel Limited and government agencies to establish a Cameron River watershed interagency planning group.

- BC Parks will start a research program to evaluate all elements of the park's old-growth forest and visitor use damage.

- BC Parks will develop an education and information program to educate the public about park resources and public-stewardship obligations and to permit effective visitor use management.

Introduction

Plan Purpose

The purpose of this master plan is to guide all resource and visitor services decisions that will be made in the next five to ten years and that will allow MacMillan Provincial Park to attain its full potential within the overall park system in British Columbia.

Background Summary

Cathedral Grove was a well known tourist stop on the Alberni Road in the 1920s and 1930s when the "timber" was owned by the Victoria Lumbering and Manufacturing Company. Even in those early days, citizens' organizations such as the Associated Boards of Trade of Vancouver Island petitioned the government in 1929 to *preserve forever, for the public benefit, the well known stand of timber at Cameron Lake, known as Cathedral Grove.*

In 1944, H. R. MacMillan, a well-known forester, scholar, industrialist, philanthropist and sportsman, donated the 136 hectares of land for the perpetual enjoyment of the public in recognition of the unique stand of trees. Three years later, the area was established as a provincial park.

The park is established as Class "A", Category 2, described as Schedule A[1], and is dedicated to the preservation of its particular natural environment for the inspiration, use and enjoyment of the public.

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[1]Category 2: "main purpose ... is the preservation and presentation to the public of specific features of scientific, historic, or scenic nature." (Park Act 12 [1] b).

Schedule "A" parks "dedicated to the preservation of their natural environments for the inspiration, use and enjoyment of the public" whose boundaries "shall not be affected except by an Act of the Legislature." (Park Act 5.5).

FIGURE 1
LOCATION MAP
MACMILLAN PROVINCIAL PARK

Similar in significance to the Muir Woods section of the California Redwoods, Cathedral Grove protects one of the few remaining examples of the Douglas-fir forest cover that was prevalent on the coast of British Columbia prior to the commencement of commercial forest harvesting.

MacMillan Park straddles the Cameron River and Highway 4, and lies almost equally distant between Parksville and Port Alberni, en route to Pacific Rim National Park Reserve. The park is world-renowned for the giant trees of Cathedral Grove and is visited by over 300,000 people annually.

Plate #2. Cathedral Grove's Giant Trees **Don Benn Photograph**

The Role of the Park

Provincial and Regional Context

MacMillan Provincial Park's old-growth forest is a natural feature of national and international significance. The "Cathedral Grove" portion of the park contains giant trees, awe-inspiring to the more than 300,000 people who annually visit the park.

MacMillan Provincial Park holds a unique place in the British Columbia Provincial Park system. MacMillan Park and Carmanah Pacific Park have the distinction of being the only Class A Provincial Parks in the system established to specifically protect and present old-growth forest.

MacMillan Park is strategically located 30 kilometres west of Parksville and 16 kilometres east of Port Alberni on Vancouver Island. Highway 4 bisects the park at the west end of Cameron Lake. In addition, Little Qualicum Falls Park lies next to MacMillan Park's northeast boundary. Other Provincial Parks in the general area include: Horne Lake Caves and Spider Lake, ten kilometres north; Englishman River, 20 kilometres southeast; Rathtrevor Beach, 30 kilometres east; and, 20 kilometres west, Sproat Lake and Stamp Falls. Strathcona Provincial Park lies 60 kilometres northwest. Pacific Rim National Park Reserve is situated near the terminus of Highway 4, 100 kilometres west of MacMillan Park.

A significant attraction to the many tourists visiting Vancouver Island, the park provides opportunities for walking and nature interpretation in this primal forest environment of trees that are mostly 300 to 400 years old and including some over 800 years old.

BC Parks developed a series of conservation and recreation goals to guide the development and management of the BC Parks system. Appendix 2 lists these goals. MacMillan Park achieves several of these goals as identified below.

Conservation Role

• The prime old-growth Douglas-fir trees are zoned Special Feature to emphasize protective management of this resource.

• The park protects and preserves an internationally significant representative example of Douglas-fir old-growth forest within the East Vancouver Island Mountains Regional Landscape.

• The park provides an opportunity for the study of the park's unique old-growth forest ecosystem to further knowledge and understanding for the protection of such resources.

Recreation Role

• MacMillan Park contributes substantially to the tourism travel route goal of BC Parks by presenting attractions and services along the Parksville to Ucluelet highway (Highway 4). This travel corridor is renowned for its lakes, outstanding west coast scenery and MacMillan Park's old-growth forest.

• Many visitors to Vancouver Island consider the Parksville - Qualicum Beach area a preferred holiday destination area. People look to MacMillan Park as a prime attraction to visit because of the park's giant trees, easy access and change of pace from the hustle and bustle of the coastal resort communities.

• Local recreation opportunities such as hiking, picnicking, fishing and nature study are available in the park and attract visitors from Port Alberni, Parksville, Qualicum Beach and Nanaimo.

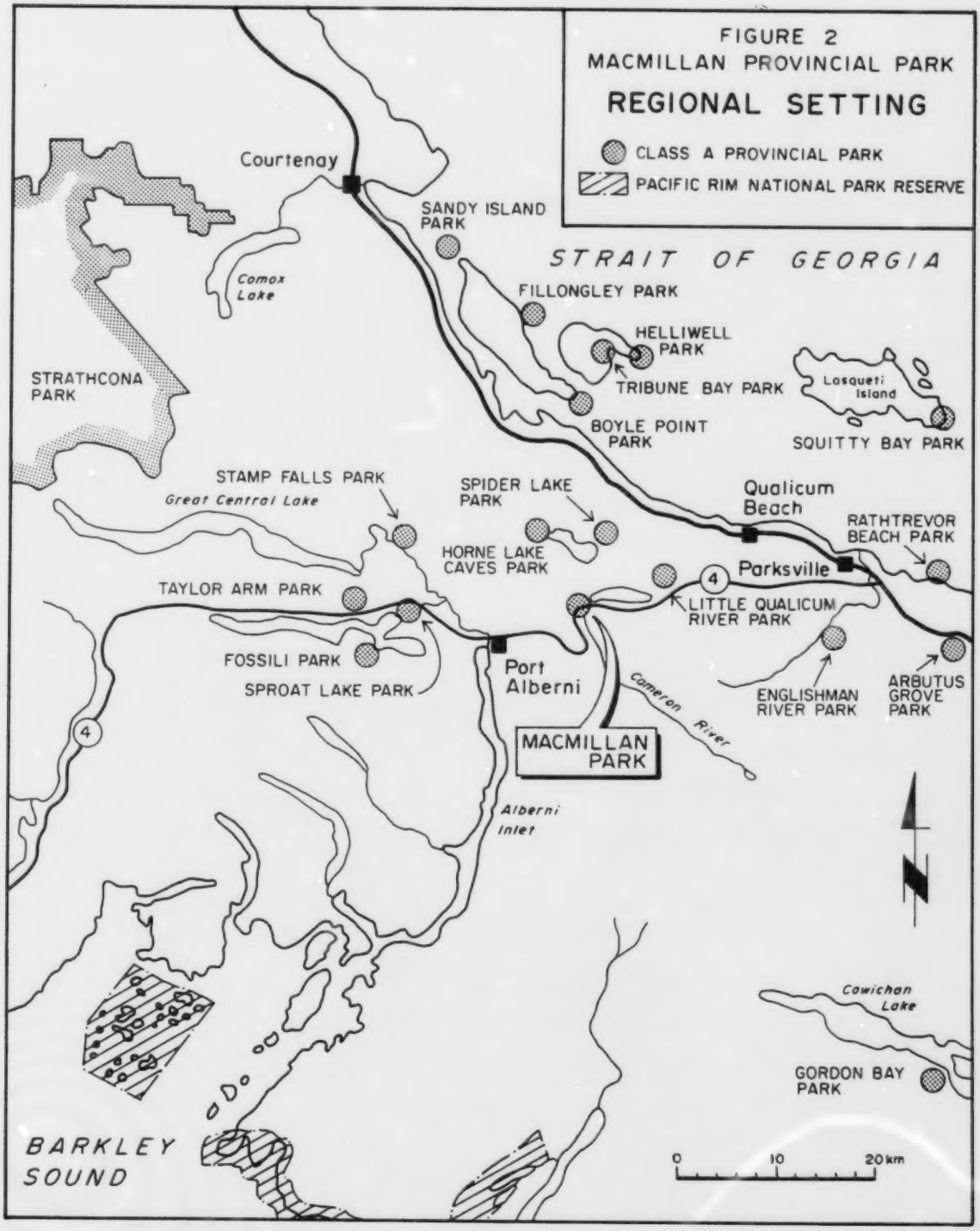
FIGURE 2
MACMILLAN PROVINCIAL PARK
REGIONAL SETTING
CLASS A PROVINCIAL PARK
PACIFIC RIM NATIONAL PARK RESERVE
Courtenay
SANDY ISLAND PARK
STRAIT OF GEORGIA
Comox Lake
FILLONGLEY PARK
HELLIWELL PARK
TRIBUNE BAY PARK
Lasqueti Island
STRATHCONA PARK
BOYLE POINT PARK
SQUITTY BAY PARK
STAMP FALLS PARK
Great Central Lake
SPIDER LAKE PARK
Qualicum Beach
RATHTREVOR BEACH PARK
HORNE LAKE CAVES PARK
Parksville
TAYLOR ARM PARK
LITTLE QUALICUM RIVER PARK
FOSSILI PARK
SPROAT LAKE PARK
Port Alberni
ENGLISHMAN RIVER PARK
ARBUTUS GROVE PARK
Cameron River
MACMILLAN PARK
Alberni Inlet
Cowichan Lake
GORDON BAY PARK
BARKLEY SOUND
0
10
20km

Zoning

Zoning is a procedure used to assist the planning and management of Park Act designations by dividing each park into logical land and water units based upon uniform and consistent management objectives. The zones reflect the intended land use, the level of management and development required and, thus, the level of human activity to be accommodated. Appendix 3 provides a detailed description of BC Parks zoning.

As indicated in Figure 2, this master plan divides MacMillan Park into three zones: Intensive Recreation, Natural Environment and Special Feature.

Intensive Recreation Zone

The objective of this zone is to provide for a variety of readily accessible, facility-oriented outdoor recreation opportunities in areas where use levels are high and the site is intensively developed. This zone is applied to MacMillan Provincial Park in such a way as to retain the outstanding natural resources features, the old-growth forest, in a natural state. Park management will emphasize the maintenance of a high quality recreation experience. This zone is applied to the southern park boundary. In order to remove the hazardous parking from the highway, a parking lot will be developed in this area, along with suitable information, picnic and sanitary facilities.

Natural Environment Zone

The objective of this zone is to act as a backdrop and buffer for the Special Feature Zone of Cathedral Grove. Use levels in this zone will be low with the exception of the main trail connecting the parking area with Cathedral Grove. The park management emphasis is on maintaining the natural environment.

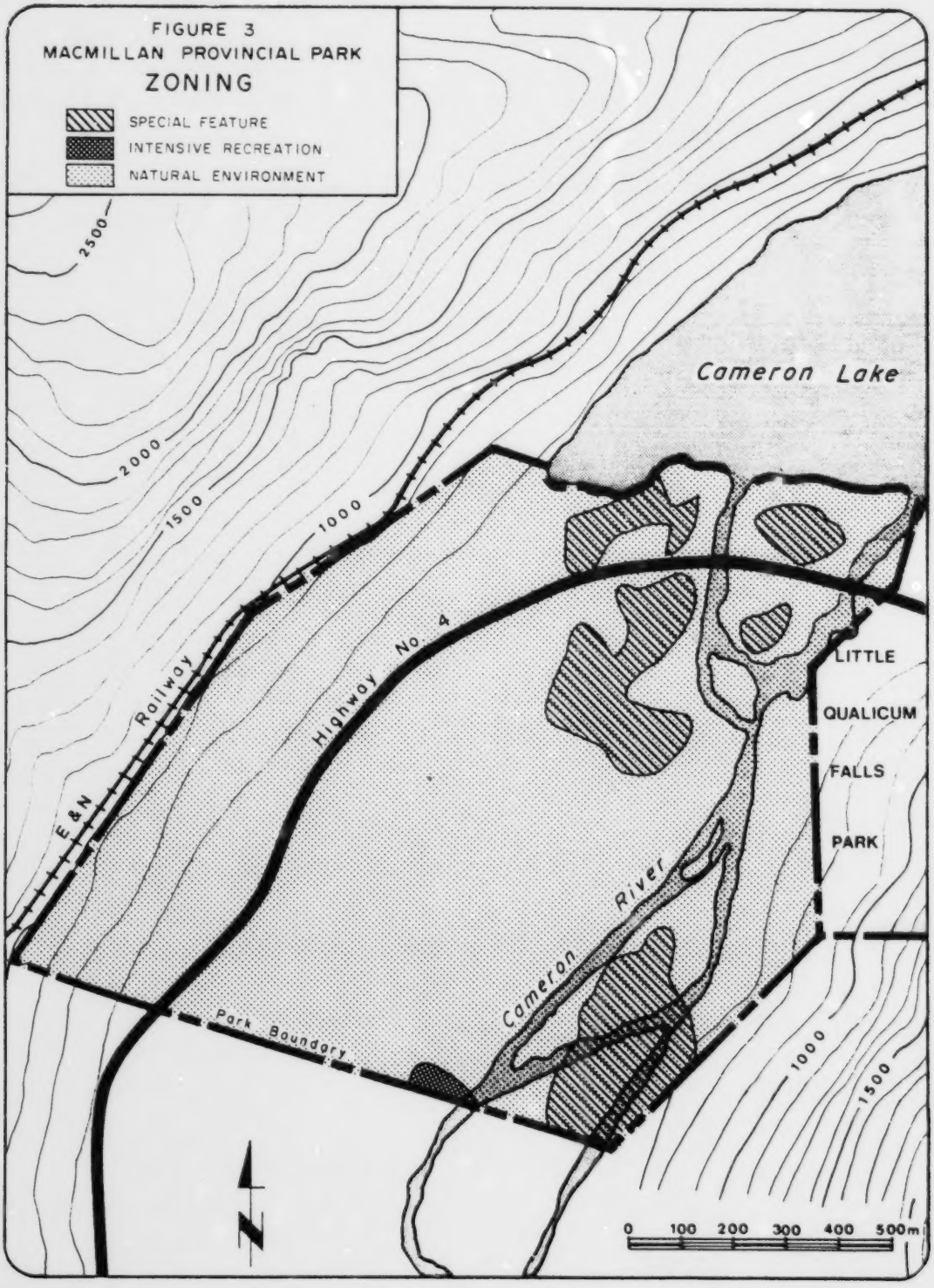
FIGURE 3
MACMILLAN PROVINCIAL PARK
ZONING
SPECIAL FEATURE
INTENSIVE RECREATION
NATURAL ENVIRONMENT
2500
2000
1500
1000
Cameron Lake
E&N Railway
Highway No. 4
LITTLE QUALICUM FALLS PARK
Cameron River
Park Boundary
1000
1500
N
0 100 200 300 400 500m

Special Feature Zone

This zone includes all of the old-growth coastal forest generally recognized as Cathedral Grove. Within this zone, BC Parks will manage the forest so natural processes will prevail and, where public use will not impair the grove, trail access and information will be provided. In addition, the recent (November, 1990) blowdown within the southeast corner of the park is included in the Special Feature Zone.

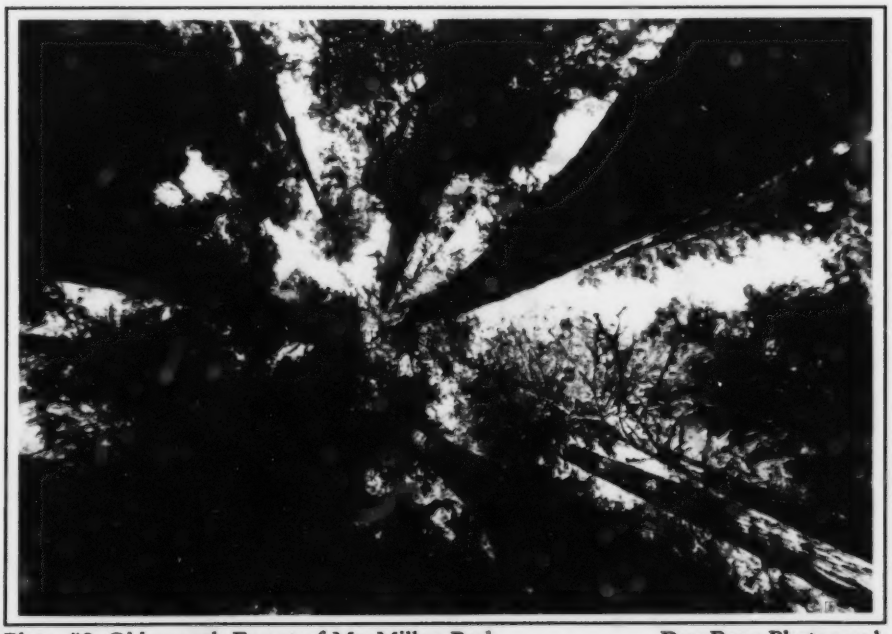

Plate #3. Old-growth Forest of MacMillan Park Don Benn Photograph

Natural and Cultural Resource Management

Introduction

MacMillan Provincial Park contains an internationally significant example of old-growth Douglas-fir forest. The park's small size and easy highway access, however, leaves the park vulnerable to visitor use pressures and adjacent land use decisions. The age of the trees which comprise Cathedral Grove also pose a major management challenge as disease, insects and weather alter the forest over time.

BC Parks will ensure its goals are met by:

- protecting the natural resources of the park;
- monitoring visitor use damage to the park environment;
- identifying and monitoring the changing conditions within the park's forest ecosystem;
- working with adjacent landowners to ensure compatible land use decisions which consider the park as an integral part of a larger land area setting; and,
- understanding this special forest ecosystem so BC Parks may improve its management of old-growth forest in the entire park system.

Land

BC Parks must address two crucial land issues: land assembly for park purposes and adjacent land use decisions.

The first issue involves the assembly of land to resolve existing public safety, natural feature and facility development concerns. The present parking lots along Highway 4 need to be relocated to provide safe public access. Moreover, MacMillan Park occupies only 30% of the area many people associate as park land as they drive on Highway 4 from Cameron Lake to Port Alberni. The remaining land is owned by MacMillan Bloedel Ltd. Also, future facility development potential must look to adjacent lands so the existing forest ecosystem remains intact and undisturbed.

The second key land issue is MacMillan Park's location within a larger area subject to industrial development. The park covers only a small area (136 hectares) within the Cameron River watershed. (See Background Report, Figure 4). The major occupier of adjacent land is MacMillan Bloedel Ltd. In addition, the Ministry of Transportation and Highways, Teleglobe Canada, and the Esquimalt & Nanaimo Railway occupy adjacent lands for highway, cable and railway right-of-ways purposes, respectively.

Land use adjacent to MacMillan park will influence the long-term viability of the park's natural values. Highway location changes, logging practices and logging road construction on these lands will affect the park. Thus, BC Parks must establish ongoing, cooperative relationships with these landowners to oversee development of this area and ensure compatible land use decisions next to the park.

Objectives:

- To identify and evaluate that area of MacMillan Bloedel Ltd.'s land that is essential to maintaining the role of the park.

- To identify and assess that area of MacMillan Bloedel Ltd.'s land essential to vehicle parking, staging and public safety.

- To ensure compatible land use decisions on lands adjacent to the park.

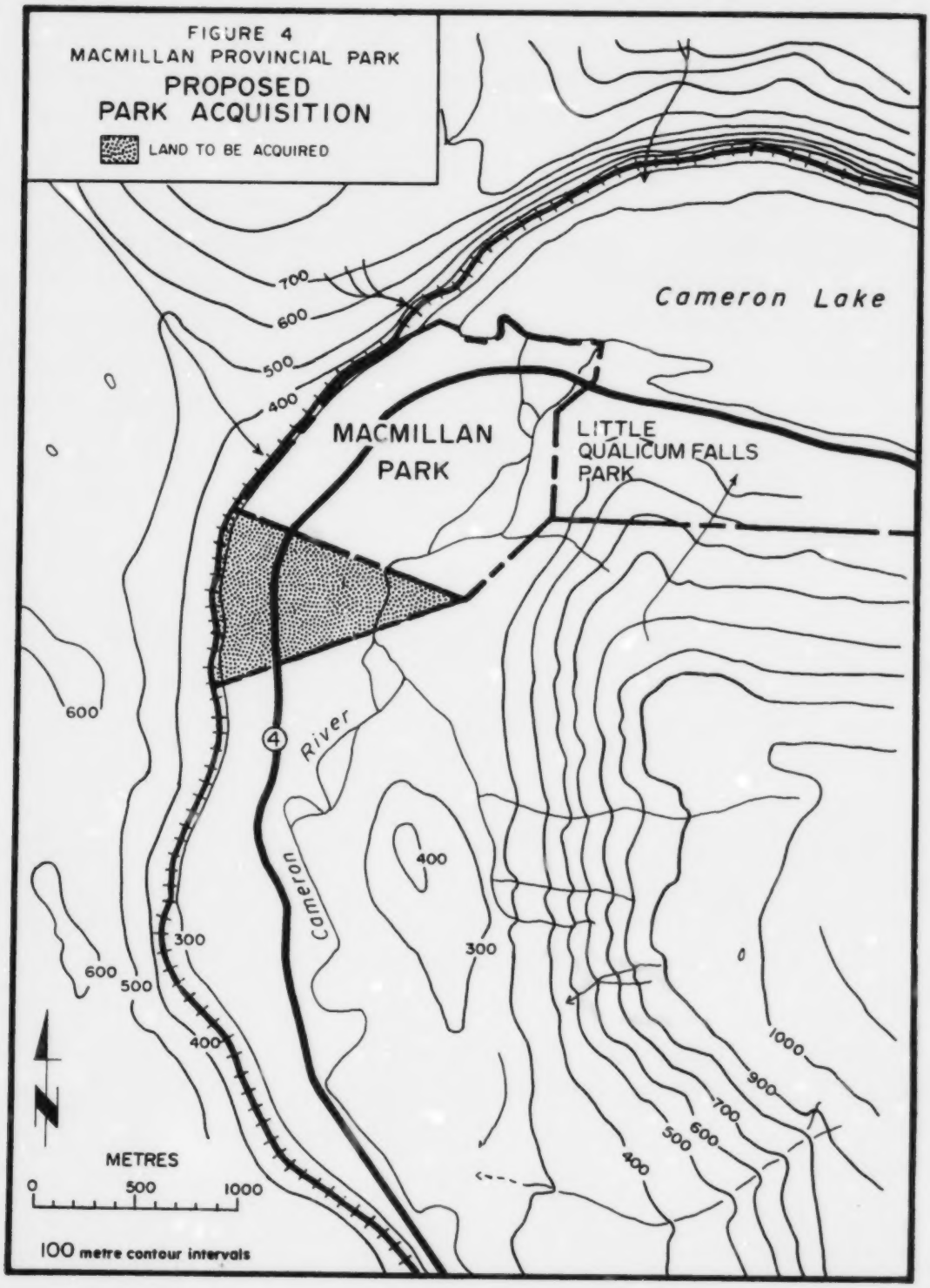
FIGURE 4
MACMILLAN PROVINCIAL PARK
PROPOSED
PARK ACQUISITION
LAND TO BE ACQUIRED
Cameron Lake
MACMILLAN
PARK
LITTLE
QUALICUM FALLS
PARK
River
Cameron
4
700
600
500
400
300
1000
900
METRES
0
500
1000
100 metre contour intervals

Actions:

- Initiate discussions with MacMillan Bloedel Ltd. to acquire those areas that are essential to the role of the park and the proposed access and staging areas (Figure 3).

- Take the lead role in working with MacMillan Bloedel (Northwest Bay Division), Ministry of Transportation and Highways, Esquimalt and Nanaimo Railway, Ministry of Forests (Port Alberni Forest District), Ministry of Environment (Water Management Division; Fisheries Branch), Fisheries and Oceans (Canada) and Teleglobe Canada to protect park values and ensure compatible land use planning and management decisions in the upper Cameron River watershed.

Water

The Cameron River is the most significant stream flowing through the park. The river is also the most important natural feature influencing the future viability of the forests in MacMillan Park.

The watershed of the Cameron River comprises the east slopes of McLaughlin Ridge and the west flank of Mount Arrowsmith. Labour Day Lake, 24 kilometres southeast of MacMillan Park is the source of the Cameron River.

The winter rains often turn the Cameron River from a quiet stream to a major water course, capable of severe erosion. In November 1990, torrential rains fell on Vancouver Island. The Cameron River flooded, inundating the park's east side. The combination of water-soaked soils and strong southwest winds led to more than six hectares of forest blowdown in the park.

Objectives:

- To ensure the Cameron River stays in its channels and does not threaten MacMillan Park and Cathedral Grove.

• To participate in the planning and management of the Cameron River watershed so MacMillan Park is protected from further flood and erosion damage.

Actions:

• Develop a monitoring program for the Cameron River within the park and take appropriate action.

• Review upstream resource developments that could contribute significantly to changes in the Cameron River as they are proposed. Those developments that would adversely affect the park will be opposed.

Vegetation

When a visitor enters the main grove in MacMillan Park, south of the Highway 4, he or she experiences a variety of perceptions. A person is immediately impressed with the immense scale of the surrounding forest. Massive, deeply furrowed trunks of Douglas-fir trees soar skyward, the sunlight filtering through the forest canopy. The forest is similar to a Gothic cathedral in its awe-inspiring columnar majesty. From a more scientific perspective, the rich biological diversity of the forest is readily apparent. Rotting snags, soft mosses, broad-leafed devil's club, and luxuriant sword ferns all combine in a mosaic of green beauty. Sadly, people also see the effects of visitor use damage where deeply incised trails and debarked trees temper the enjoyment of MacMillan Park's special forest environment.

The mixed old-growth forest species of Douglas-fir, grand fir, western redcedar and western hemlock in MacMillan Provincial Park is a dynamic, changing ecosystem. Disease, insects, public use and the advancing age of the forest place a variety of pressures on the ecosystem and its long-term health.

As a result of research from 1979 to 1989 in Washington, Oregon and California, scientists and foresters are beginning to understand the characteristics of old-growth forests. In British Columbia, the Ministry of Forests and Universities have not done similar research. Macmillan Park represents a unique opportunity for such research because of its old-growth forest values and easy accessibility.

Objectives:

- To determine the present health of the stand and recommend practices, if any, to improve the health and to protect the stand from any actions that will reduce its longevity.

- To encourage scientific research on MacMillan Park's old-growth forest.

- To conserve the natural process of forest succession and protect existing vegetation and forest values.

- To protect soils in the park from excessive compaction and erosion resulting from human activity.

Actions:

- Conduct research associated with furthering knowledge of stand dynamics, visitor impacts, stand health and identify potential external impacts.

- Permit natural processes to proceed. The BC Parks tree hazard control program will not apply to MacMillan Park.

- Undertake full environmental assessments of all BC Parks facility development proposals affecting MacMillan Park's forest and vegetation values.

- Solicit old-growth forest research proposals from academic and scientific organizations.

Plate #4. MacMillan Park's Old-growth Forest
BC Parks Photograph (Bill Merilees)

• Guard the park's damaged and sensitive large feature trees from further damage and disturbance from public use.

• Prevent soil compaction and erosion through proper trail location and the use of elevated walkways. Particular management emphasis will be applied to forest within the Special Feature Zone.

• Prepare a fire protection plan.

Fish and Wildlife

MacMillan Provincial Park includes wildlife species characteristic of the old-growth Douglas-fir forest which once covered extensive parts of Vancouver Island. Scientists continue to study the wildlife species associated with such forests. Thus, the park plays an important role not only in preserving such wildlife, but also in providing scientists with a benchmark to evaluate how heavy visitor use may affect these animals.

Objective:

• To protect wildlife species dependent on old-growth Douglas-fir forest.

• To encourage scientific knowledge and understanding of the park's wildlife and wildlife habitats.

• To conserve fish populations and habitats within that portion of the Cameron River inside the park.

Actions:

• Develop a wildlife management plan for the park to include:
  - Identification of the wildlife species characteristic of valley bottom old-growth Douglas-fir forests;

- a wildlife inventory of the park to determine whether the park currently supports the species expected;
- measures to rebuild populations of wildlife species which require preservation in the park;
- Identification of elements within and outside of the park which could harm the wildlife and destroy wildlife habitats;
- measures that counteract the harmful elements to ensure preservation of the wildlife;
- the role of fire, insects and disease in creating wildlife habitat including snags for various bird and animal species;
- cooperative management with adjacent land holders; and,
- opportunities for research programs.

- Maintain the current hunting closure.

- Prepare an environmental assessment of any future recreational development in the park.

- Carry out a study of fish and their habitats within the park.

Visual Resources

The private forest land adjacent to the park boundaries requires visual management that ensures adequate buffering and screening of these views.

Objectives:

- To maintain visual screening of the adjacent private forest lands and to maintain the park-like setting along Highway 4.

Actions:

- Initiate discussions with MacMillan Bloedel Ltd. to minimize the impact on the visual resource associated with timber harvesting on adjacent lands.

• Liaise with Ministry of Transportation and Highways to ensure a park-like setting.

Cultural Resources

Little is known about Native people's use of the Cameron River Valley and MacMillan Park. The Nuu-Chah-Nulth Native people of the Port Alberni area and the Qualicum Native people should be consulted to determine the importance of the MacMillan Park area to their culture.

Industrial land use and transportation development affected the Cameron River Valley significantly. Greater research should be devoted to the understanding and presentation of these themes.

Objectives:

• To preserve cultural values relating to the prehistory and history of the park.

• To provide information and education about the park's cultural values.

Actions:

• Inventory and evaluate cultural values for educational and recreational potential, for scientific needs, and for protective status.

• Develop heritage education programs emphasizing the themes of historic transportation and land use development in the Cameron River Valley.

• Establish direct contact with the Nuu-Chah-Nulth and Qualicum Native people to determine the significance of the MacMillan Park area to their culture.

Visitor Services

Introduction

Many people consider MacMillan, Mount Robson and E.C. Manning Parks the "flag-ships" of the British Columbia Parks system. These parks share the following common characteristics: easy automobile access, location along a strategic Provincial highway, a high rate of year-round visitation, and natural values and recreation features of high or very high feature significance.

MacMillan Park offers an unparalleled opportunity to reach large numbers of visitors to the Province of British Columbia. The unique old-growth forest provides the vehicle to inform visitors about the B.C. Parks system, the BC Parks agency, and the agency's dual conservation and recreation mandate. The park could also serve as a catalyst for a multi-agency information and education program about such themes as old-growth forests, forest management, and natural and cultural resource conservation.

Over 300,000 people visit MacMillan Park each year. While most visitors come from British Columbia and Alberta, a growing number originate from international points, especially Europe. For many of these visitors, MacMillan Park represents their only opportunity to see and experience a coastal old-growth forest.

MacMillan Park's visitor service facilities require improvement to meet existing public safety, access and natural resource protection needs. This master plan advocates a facility development program which ensures maximum protection of the forest while still permitting the public safe and reasonable access to Cathedral Grove.

General Concept

As described in Appendix 2 of this master plan, BC Parks defines four recreation goals which provide visitor services to Provincial Park users. MacMillan Park satisfies three of these goals as described below.

Travel Route

BC Parks identifies Highway 4 as a Tourism Travel Route in the Parks Plan 90 report Recreation Goals for BC Parks. Highway 4, also known as the Alberni Highway, links Parksville on the east coast of Vancouver Island with Ucluelet on the west coast. The highway functions as a major industrial, transportation and tourism corridor for Vancouver Island. Parksville, Qualicum Beach, Port Alberni, Ucluelet and Tofino are the largest communities along this highway.

The touring public gains a variety of recreation experiences while travelling Highway 4. The key experience, however, is "driving to Pacific Rim National Park." People use Highway 4 to reach the three units of this magnificent National Park Reserve - the West Coast Trail unit, the Broken Group Islands unit and the Long Beach unit.

Highway 4 traverses a remarkable variety of farmland, logged areas, forest environments, scenic landscapes, lake country and special features. People stop at the many picnic sites, viewpoints and public and private campgrounds along this route. For a significant number of people, the key attraction is MacMillan Park. Here, in Cathedral Grove, visitors are given the opportunity to experience a unique, old-growth Douglas-fir forest. For those visitors on their way to Pacific Rim National Park Reserve or the remote Carmanah Pacific Provincial Park, MacMillan Park's forest gives a foretaste of similar old-growth Sitka spruce forests in those locations.

Outdoor Recreation Holiday Destination

BC Parks identifies southeast Vancouver Island (Victoria to Qualicum Beach) as one of the key outdoor recreation holiday destinations in the province. Many people who visit Vancouver Island consider the Parksville - Qualicum Beach area a preferred destination for their holidays.

People holidaying in the area consider MacMillan Park a prime attraction. "Walking through the giant trees of Cathedral Grove" is the key experience associated with this goal. The trails which wind through Cathedral Grove and the interpretive signs along the way provide people with a special, rare experience. The majestic scale of the trees, the lush beauty of the forest canopy and understorey, and the beauty of the Cameron River are a dramatic contrast to the often crowded, busy beaches and resorts in the Parksville and Qualicum Beach area.

Local Recreation

MacMillan Park presents an internationally famous old-growth forest, easily accessible for the local citizens of Port Alberni, Parksville, Qualicum Beach and Nanaimo. Walking, picnicking and nature appreciation are available in the park.

Access Strategy

Highway 4 is the only public road access to MacMillan Park. The highway crosses the west side of the park from north to south. Two parking lots are provided on opposite sides of the highway in the north portion of the park. The master plan advocates moving the parking lots off the highway to the south end of the park.

Information Strategy

MacMillan Park straddles a significant tourism travel route. This strategic location creates outstanding potential for BC Parks to inform and educate British Columbia citizens and visitors to the province.

This master plan advocates the construction of a modest visitor centre on lands currently outside the park. This concept establishes for MacMillan Park a role similar to that performed by Mount Robson Park and E.C. Manning Park visitor centres of: a) welcoming visitors to British Columbia (and Vancouver Island); b) describing the BC Parks system; c) defining the BC Parks conservation and recreation mandate; and, d) providing tourism information.

The visitor centre could also function as an information distribution point for MacMillan Bloedel, the Canadian Parks Service and the Pacific Rim Tourism Association. The information could accomplish the following aims:

- For BC Parks:
  - inform people about the BC Parks agency and the Provincial Park system;
  - educate people about MacMillan Park's role in achieving BC Parks system goals;
  - inform people about the park's natural and cultural values;
  - instill in people a sense of stewardship for the park and the park system; and,
  - permit people to enjoy the park's visitor services.

- For MacMillan Bloedel Limited:
  - provide the public with an overview of the Company and its operation in British Columbia and the Cameron River Valley;
  - make people conversant with modern timber harvesting techniques;
  - inform people about forest management planning within Block 35 and the Cameron River Valley;
  - establish a dialogue with the public on forest management related to the long-term protection of MacMillan Park.

- For the Canadian Parks Service:
  - Make people aware of the Canadian Parks Service, its mandate and the National Parks system;
  - Inform the public about Pacific Rim National Park Reserve.

- For the Pacific Rim Tourism Association:
  - Inform visitors of the tourism offerings in the region.

All user groups stopping at MacMillan Park will receive this information. BC Parks will provide park visitors with information through: 1) awareness and pre-trip planning; 2) orientation and information; and, 3) natural and cultural resource education. These means are described below.

Awareness and Pre-trip Planning

The Strathcona District Office, the South Coast Region Office and the Victoria Headquarters Office provide park awareness and pre-trip planning information for MacMillan Park. The chief source of information about the park is contained in the BC Parks map brochure titled Provincial Parks of Vancouver Island. BC Parks produces no brochure specifically about MacMillan Park.

People learn about MacMillan Park through a variety of other sources. Regional location maps in nearby Provincial Parks such as Little Qualicum Falls Park identify MacMillan Park's location. In addition, a variety of publications from travel books to souvenir postcards also inform the public about the park.

Objectives:

- To provide information about MacMillan Park for visitor awareness and pre-trip planning.

Actions:

- Produce a MacMillan Park brochure outlining park location, park conservation and recreation roles, park natural and cultural resources, and public stewardship obligations to protect the forest.

Orientation and Information

BC Parks provides park orientation and information largely through on-site signs. A self-guiding interpretive trail is the primary park facility for this purpose. BC Parks, however, does not supply an interpretation program at MacMillan Park.

The Pacific Rim Tourism Association operates a small public information kiosk in one of the MacMillan Park parking lots. While some information about the park is available, the Tourism Association representatives answer public enquiries largely about tourism attractions in the Port Alberni region.

The large numbers of visitors to MacMillan Park pose a significant opportunity and a resource damage challenge. Park managers are aware of the soil compaction, bark removal and tree defacement caused by people visiting the park. The large numbers of people also give BC Parks an opportunity to effectively distribute Ministry information.

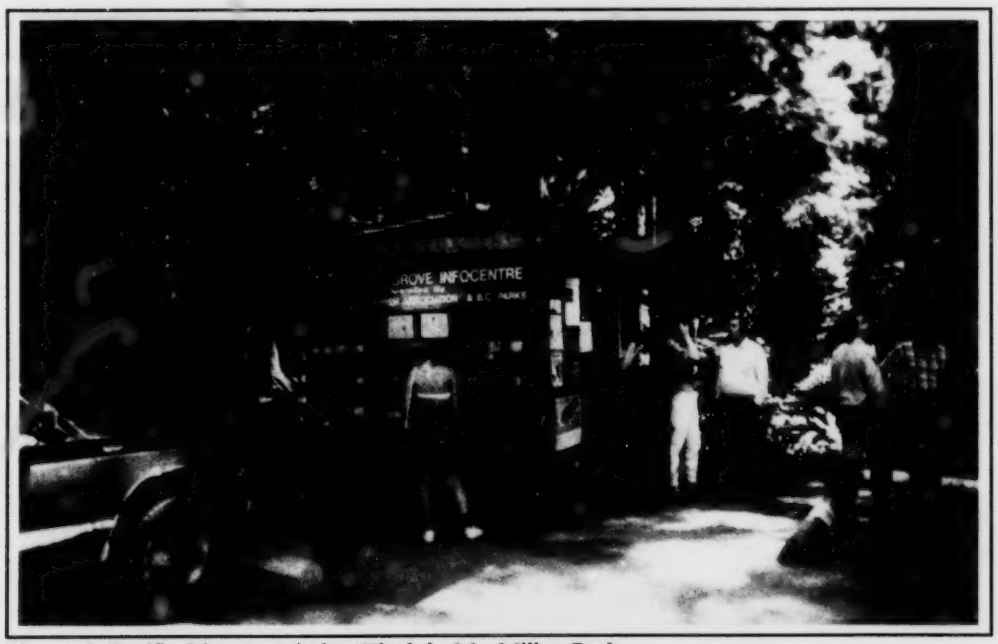

Plate #5. Pacific Rim Association Kiosk in MacMillan Park
BC Parks Photograph (Roger Norrish)

An important program objective is the preparation of a communications plan. This plan will examine how to best communicate with the intended audience. Direct, personal contact with individuals and groups is an obvious direction to consider. The plan will also consider the following approaches: user satisfaction surveys, signs and displays, parks brochures, written and electronic media, the visitor centre, special park events and corporate sponsors.

The communications plan will define the conservation, recreation and safety messages to be presented to the public. BC Parks will consider such themes as protection of the park's old-growth forest; adjacent land uses and their effect on the park; stewardship of park resources; and nature appreciation activities.

This master plan advances the concept of a multi-agency visitor centre as a key BC Parks Visitor Services program initiative. This concept embraces the following elements:

- A multi-agency operation with BC Parks as the lead agency and the Canadian Parks Service, MacMillan Bloedel Limited and the Pacific Rim Tourism Association as potential participants;

- A low-maintenance building which could operate year-round;

- An unobtrusive building design compatible with the old-growth forest setting;

- A state-of-the-art parking lot design to reduce environmental damage, minimize tree removal and accommodate a range of vehicles from small cars to tour buses;

- High-quality displays illustrating approved themes; and,

- An outdoor presentation area linked with the Cathedral Grove and blowdown interpretive trail system.

All park facilities and signs will be consistent to create a park identity. Expansion of the self-guided interpretive trail will be considered. A loop trail linking the new parking lot and visitor centre to the existing trail system will be constructed.

Objectives:

- To supply a large audience with information which informs them about the BC Parks system and MacMillan Park.

- To furnish information about regional tourism opportunities.

- To participate in the development of an visitor centre at the south end of MacMillan Park.

Actions:

- Develop and evaluate ideas for the design and installation of a visitor centre in MacMillan Park.

- Prepare a large-audience communication plan as outlined above.

- Set up an information program which emphasizes contact with large user groups inside MacMillan Park.

Natural and Cultural Resource Education

MacMillan Park is a superb vehicle for natural and cultural resource education and interpretation. The park's old-growth Douglas-fir forest presents an ecosystem with a high level of public interest, both locally and internationally.

MacMillan Park's location on a main travel corridor, permits easy access for the public. With over 300,000 people visiting the park in 1990, this park presents an immense opportunity to reach a large audience with such themes as the BC Parks mandate and goals; resource stewardship; and, park protection.

Park interpretation programs exist at Rathtrevor Park. Some outlying parks, such as Englishman River also receive such services intermittently. This master plan recommends including MacMillan Park as a cornerstone in an integrated interpretation program for Central Vancouver Island. A well organized interpretation program could be BC Parks most successful tool for protecting MacMillan Park from overuse, vandalism, and forest loss.

Objectives:

- To provide a large audience education program at MacMillan Park.

- To ensure MacMillan Park is part of an integrated park interpretation program for Central Vancouver Island.

- To direct the education program in MacMillan Park to the long-term protection and continued survival of the old-growth, Douglas-fir forest.

- To involve MacMillan Bloedel Limited in the development of an information program for MacMillan Park.

- To encourage local educational institutions to use MacMillan Park as a teaching and research resource.

Actions:

- Link MacMillan Park into the present Central Vancouver Island integrated interpretation program.

- Institute a visitor survey to assess what people want in an education program for MacMillan Park.

- Develop appropriate messages for the protection of MacMillan Park's forest;

• Work with appropriate institutions, such as the University of British Columbia and Malaspina College in Nanaimo to adopt MacMillan Park as a source for teaching and research opportunities in the subject areas of conservation, forest ecology, forest management, and park management.

• Establish an education program which will incorporate the following themes:
  - old-growth forest ecosystems;
  - transportation and land-use history of the Cameron River Valley;
  - stewardship of park natural and cultural resources; and,
  - BC Parks mandate and goals.

Marketing

Image

MacMillan Park's image and identity are strongly linked to Parksville, Qualicum Beach and Port Alberni. In large measure this magnificent Class A Park owes its existence to the foresight of the citizens of these towns in getting the park established. The persistent lobbying in the 1930s and 1940s by local Chambers of Commerce, town councils and individual citizens eventually persuaded H.R. MacMillan to donate Cathedral Grove and the Provincial Government to establish the area as parkland.

Today residents and visitors alike to this part of Vancouver Island consider "Cathedral Grove" an important attraction. The Pacific Rim Tourism Association advertises MacMillan Park in its tourism literature. The Association also uses the park as a distribution point for tourist information during the summer.

The name "Cathedral Grove" is more familiar to many visitors than the official title of MacMillan Park. This image of a cathedral-like forest setting is unique. People are awe-struck by the majesty of the towering Douglas-fir, redcedar, and western hemlock trees. Indeed, European visitors are particularly impressed by this forest because, centuries ago, similar forests disappeared from the European continent.

This image of the "Cathedral Grove" is one BC Parks can build upon to enforce the conservation mandate messages given to the public. The development of a high-quality education and interpretation program, improved park facilities and continued easy access will assist this image.

Promotion

MacMillan Park is the eighth most heavily used dayuse Provincial Park. Promotion of the park, therefore, is not a major initiative. The park, however, remains a significant attraction to visitors travelling Highway 4 and spending their holidays in the Parksville and Port Alberni region. The unique old-growth forest experience will continue to be promoted in conjunction with the Pacific Rim Tourism Association and local community programs.

Objectives:

- To promote MacMillan Park as a unique forest experience in the Parksville and Port Alberni region.

- To improve park facilities to meet visitor needs.

- To ensure consistent high quality standards are maintained in marketing MacMillan Park.

Actions:

- Work with the Pacific Rim Tourism Association and local communities to develop an appropriate marketing scheme for MacMillan Park.

- Enlist MacMillan Bloedel Limited as corporate sponsor for forest education events in MacMillan Park.

- Examine the idea of a special MacMillan Park day to commemorate old-growth forest in British Columbia.

Management Services

MacMillan Provincial Park is administered by the Arrowsmith Zone of the Strathcona District. BC Parks will continue to manage the park from Little Qualicum Falls Provincial Park. With the installation of an visitor centre in MacMillan Park, the daily presence of staff during summer will be considered.

BC Parks staff perform the following tasks in managing MacMillan Park:

- Regulate public use to ensure safe and proper use of the park;

- Maintain trails, signs and other park facilities;

- Prepare Annual Management Plans that address approved Master Plan development and management actions;

- Enforce Park Act Regulations and conditions of Park Use Permits;

- Collect user data and monitor visitor use;

- Apply various hazard control programs (except hazard tree) and other park user safety measures; and,

- Monitor land use activities within the Highway 4 corridor, utility rights-of-way and on adjacent lands to protect park natural and cultural resources.

Objectives:

- To maintain a BC Parks presence within MacMillan Park to provide enforcement, resource management, interpretation and safety services.

Actions:

- Provide a year-round management presence in the park.

Visitor Opportunities

Auto Access Sightseeing

The "drive to Pacific Rim National Park" experience introduces the Highway 4 traveller to a variety of scenery and land use activities. MacMillan Park's forest environment is a highlight of this experience.

Objectives:

- To maintain the pleasant forest environment along Highway 4 within the Park and on lands north and south of the park.

Actions:

- Reach an understanding with the Ministry of Transportation and Highways on maintenance standards of Highway 4 Right-of-Way through Little Qualicum Falls Park, MacMillan Park and the lands west of the park to Summit Lake.

- Continue to provide information and interpretation information and signs for viewing points of interest in the park.

- Coordinate sightseeing opportunities with the Ministry of Transportation and Highways along Highway 4 from the east entry of Little Qualicum Falls Park to the west side of MacMillan Park.

Day Use

For many visitors, a visit to MacMillan Provincial Park is more than viewing the grove. Picnicking, some fishing, and strolling occur in conjunction with the viewing.

Objectives:

- To encourage those day use activities which complement and enhance the park's role.

Actions:

- Develop parking, picnicking, sanitary and information facilities adjacent to the Cameron River and associated interpretive trails to link up with the existing developed trails in Cathedral Grove and the existing Cedar Trail north of Highway 4 via a bridge underpass. A shorter loop trail will provide access for those visitors not willing or able to see the grove. (See Figure 5).

Natural and Cultural Resource Appreciation

MacMillan Provincial Park's outstanding old-growth forest has exceptional nature appreciation, interpretation and education potential. Activities, such as self-guided trail walks are popular and build an appreciation for this special forest ecosystem. The creation of an visitor centre will further enhance this primary recreation opportunity. The recent blowdown in the southeast corner of the park should be used as a interpretation area.

Objectives:

- To encourage greater visitor appreciation and understanding of the park's natural and cultural resources.

Actions:

- Inform the visitor of the recreation and conservation role of MacMillan Provincial Park and other areas through development of the trail program and information packages such as on-site signs and brochures.

- Develop interpretation displays to present the old-growth forest theme.

- Develop interpretation displays to present the transportation and MacMillan Park history themes.

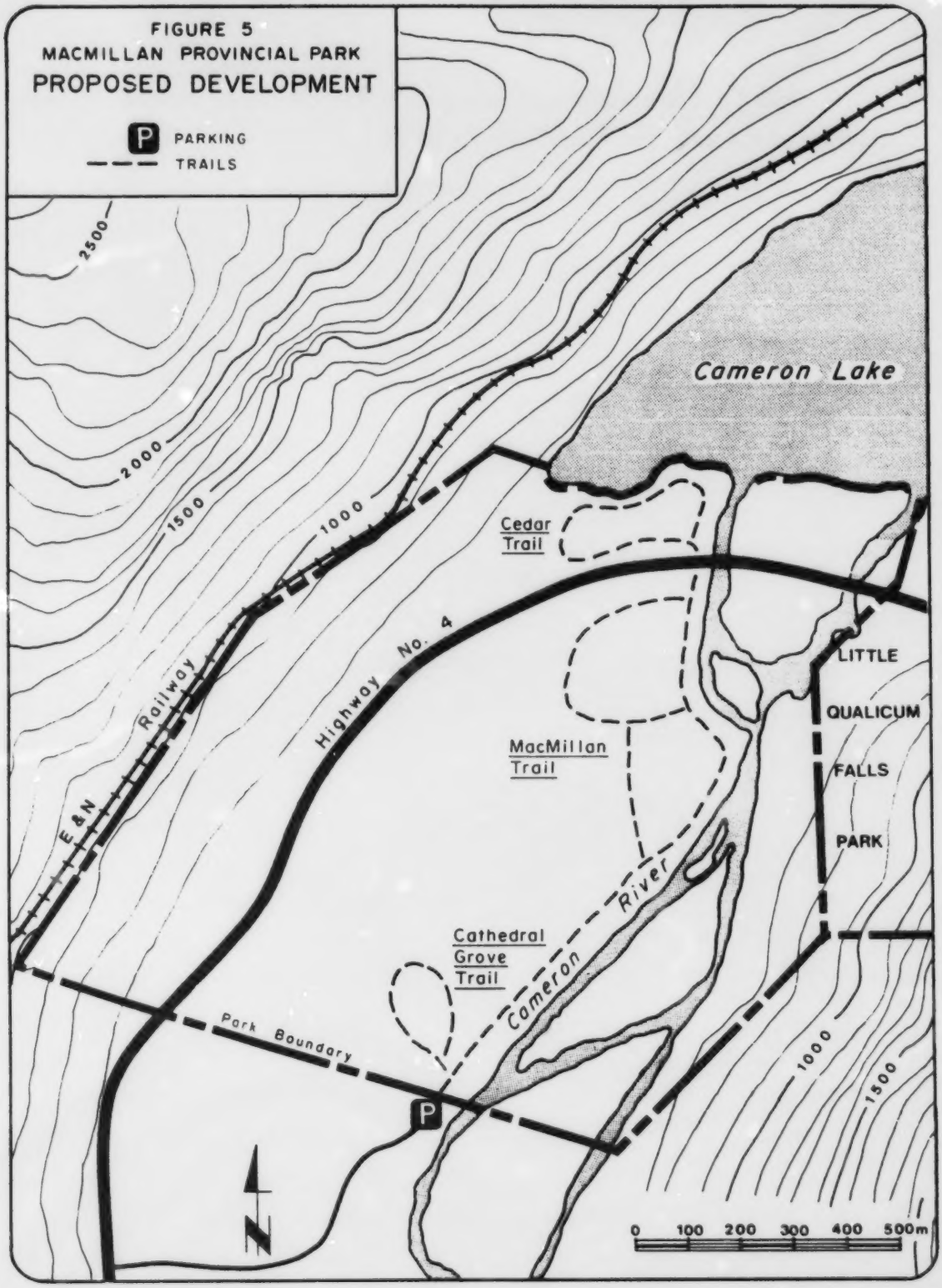
FIGURE 5
MACMILLAN PROVINCIAL PARK
PROPOSED DEVELOPMENT
P PARKING
TRAILS
2500
2000
1500
1000
Cameron Lake
Cedar Trail
Highway No. 4
E & N Railway
LITTLE QUALICUM FALLS PARK
MacMillan Trail
Cameron River
Cathedral Grove Trail
Park Boundary
P
1000
1500
N
0 100 200 300 400 500m

• Expand the interpretive trail potential through the use of elevated walkways, wheel-chair access trails, and loop trail systems.

Plate #6. MacMillan Park 1990 Blowdown - an interpretation feature.
BC Parks Photograph (Roger Norrish)

Plan Implementation

Natural and Cultural Resource Management

Phase 1 (High Priority)

Land

- Start discussions with MacMillan Bloedel Limited to acquire areas essential to the park role and the proposed access and staging areas.

- Take the lead role in working with MacMillan Bloedel Limited, Esquimalt and Nanaimo Railway, Teleglobe Canada, Fisheries and Oceans (Canada) and other Provincial Government agencies to protect park values and ensure compatible land use planning and management decisions in the Cameron River watershed.

Water

- Review upstream resource developments that could contribute significantly to changes in the Cameron River as they are proposed.

Vegetation

- Conduct research into stand dynamics, visitor impacts, stand health and potential external impacts.

- Permit natural processes to proceed.

- Undertake full environmental assessments of all BC Parks facility development proposals affecting the park's vegetation.

- Guard the park's damaged and sensitive large feature trees from further disturbance.

- Prevent soil compaction and erosion through proper trail location, construction and the use of elevated walkways.

- Prepare a fire management plan.

Wildlife

- Maintain current hunting closure.

Phase 2 (Moderate Priority)

Water

- Develop a monitoring program for the Cameron River within the park and take appropriate action.

Vegetation

- Solicit old-growth forest research proposals from academic and scientific organizations.

Wildlife

- Develop a wildlife management plan.

- Prepare an environmental assessment of any future recreational development in the park.

- Conduct a study of fish and their habitats within the park.

Visual Resources

- Start discussions with MacMillan Bloedel Limited to minimize the impact on the visual resource associated with timber harvesting on adjacent lands.

- Liaise with the Ministry of Transportation and Highways to ensure a park-like setting.

Cultural Resources

- Complete an inventory and evaluation of cultural values.

- Develop heritage education programs.

- Establish direct contact with Nuu-Chah-Nulth and Qualicum Native people.

Visitor Services

Phase 1 (High Priority)

Information Strategy

- Produce a MacMillan Park brochure.

- Develop and evaluate ideas for the design and installation of a visitor centre in MacMillan Park.

- Prepare a large-audience communication plan.

Marketing

- Work with the Pacific Rim Tourism Association and local communities to develop an appropriate marketing scheme for MacMillan Park.

Management Services

- Provide a year-round management presence in the park.

Visitor Opportunities

- Develop parking, picnicking, sanitary and information facilities in the park.

- Inform the visitor of the recreation and conservation role of the park.

Phase 2 (Moderate Priority)

Information Strategy

- Set up an information program which emphasizes contact with large user groups inside MacMillan Park.

- Link MacMillan Park into the present Central Vancouver Island integrated interpretation program.

- Institute a visitor survey to assess what people want in an education program.

- Develop appropriate messages for protection of MacMillan Park's forest.

- Work with appropriate institutions to adopt MacMillan Park as source for teaching and research opportunities.

- Establish an education program using old-growth forest, historical, stewardship and BC Parks mandate and goals themes.

Marketing

- Enlist MacMillan Bloedel Limited as a corporate sponsor for forest-education events in MacMillan Park.

- Examine the idea of a special MacMillan Park day.

Visitor Opportunities

- Reach an understanding with the Ministry of Transportation and Highways on Highway 4 right-of-way standards.

- Continue to provide information and interpretation signs for viewing points of interest in the park.

- Coordinate sightseeing opportunities along Highway 4 with the Ministry of Transportation and Highways.

- Develop interpretation displays to present the old-growth forest theme.

- Develop interpretation displays to present the transportation and MacMillan Park history themes.

- Expand the interpretive trail potential in the park.

Appendix 1

Background Report

Table of Contents

	Page
Introduction	46
Natural and Cultural Resources	47
Natural Resources	
Natural Region/Regional Landscape	
Climate	
Physiography	
Soils	49
Water	50
Vegetation	51
Wildlife	56
Visual Resources	58
Cultural Resources	59
Analysis	61
Tenures, Occupancy Rights and Jurisdictions	62
Recreation Opportunities	64
Market Analysis	66
Existing Use	
Visitor Profile	67
Supply	
Demand	70
Planning Issues	71
Bibliography	73

Page

List of Figures

Figure 1 Physiographic Features 49

Figure 2 Highest Recreation Values 57

Figure 3 Existing Facilities 63

Figure 4 Land Status 65

List of Tables

Table 1 Climatic Data 48

Table 2 Protected Old-Growth Forest in Coastal British Columbia 53

Table 3 Plant Associations 55

Table 4 Use Patterns 66

Introduction

MacMillan Provincial Park is a striking natural feature of national and international significance. Surrounded by other parks of provincial significance, fronting on Cameron Lake and bisected by several arms of the Cameron River, it is the giant trees of the Cathedral Grove section of the park that are unique and inspirational to the 300,000 people who annually visit the park and to the many who are simply satisfied knowing that the park exists.

A significant attraction to the many tourists visiting Vancouver Island, the park provides opportunities for walking and nature interpretation in this primal forest environment of trees that are mostly 300 to 400 years old including some which are over 800 years old.

In 1944, H. R. MacMillan, a well-known forester, scholar, industrialist, philanthropist and sportsman, donated the 136 hectares of land for the perpetual enjoyment of the public in recognition of the unique stand of timber. Three years later, the area was established as a provincial park.

Similar in significance to the Muir Woods section of the California Redwoods, Cathedral Grove protects one of the few remaining representatives of the forest cover that was prevalent on the coast of British Columbia prior to the commencement of commercial forest harvesting.

Natural and Cultural Resources

Natural Resources

Natural Region/Regional Landscape

MacMillan Provincial Park lies within the Insular Mountains Natural Region and represents a valley component of the Vancouver Island Mountains Regional Landscape.

Climate

The regional climate of the slopes of east Vancouver Island is described as drier Cfb (a mesothermal climate with no distinct dry season and temperature of the warmest month below 22°C). The characteristic feature of this climate is low precipitation during the growing season. The park represents a climatic transition between a wetter Csb (mesothermal, summer is dry, with at least three times as much rain in the wettest month of winter as in the driest month in the summer, precipitation of the driest month of summer less than 3 cm, and mean monthly temperature of the warmest month below 22°C) and a drier Csb climate. This climatic data for the park and the region is presented in Table 1.

Physiography

The major feature of the Vancouver Island Ranges in the area surrounding MacMillan Provincial Park is the narrow northwest-tending range of mountains, including the Beaufort Range and Mount Arrowsmith (1,617 m).

The most striking glacial erosion feature in the area of the park is the U-shaped Cameron Valley (Figure 1). The valley had no tributary from which mountain glaciers formed. Instead, ice moved southwest across the Beaufort Range through Cameron Valley from the Georgia Depression toward Alberni Valley. Cameron Lake lies in a rock-cut basin.

Table 1

Selected climatic data for MacMillan Park and the East Vancouver Island

Drier Maritime Coastal Hemlock Biogeoclimatic Variant

Climatic Parameter	Predicted Values for MacMillan Park	Mean Values for East Vancouver Island Drier Maritime Coastal Western Hemlock Biogeoclimatic Variant
Climate (Koppen/Trewartha)	Wetter Csb	Drier Cfb
Mean Annual Precipitation (mm)	1690	2060
Mean Precipitation of Driest Month (mm)	28	36
Mean Precipitation of Wettest Month (mm)	277	347
Mean Precipitation Apr to Sept (mm)	340	404
Mean Annual Temperature (°C)	8.3	8.7
Mean Temperature of the Warmest Month	17.0	16.8
Mean Temperature of the Coldest Month (°C)	-0.1	0.9
Number of Months With Mean Temperature Over 10°C	5.4	5.0
Number of Months With Mean Temperature Below 0°C	1.1	0.0
Index of Continentality	18	15

From Ecosystems of MacMillan Park on Vancouver Island

The park is predominantly flat and is situated approximately 200 m above sea level. Its western and eastern limits feature steep slopes with a gradient approaching 50 percent and, occasionally, more. Cameron River is a low gradient river forming an alluvial floodplain in the park.

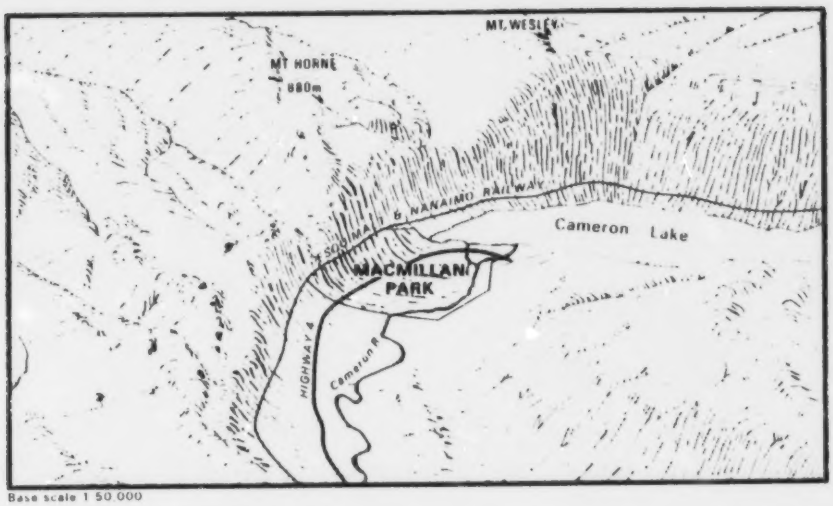

Figure 1: Block diagram illustrating physiographic features of MacMillan Park and surrounding area from Ecosystems of MacMillan Park on Vancouver Island

Soils

Postglacial events caused the majority of soil formation to begin from alluvial and colluvial surficial deposits instead of materials deposited by the ice action. These deposits influence the soil development mainly through their texture, coarse fragment content, consistency and mineralogy. Alluvial and colluvial materials derived from volcanic rocks (mainly basalt) are predominant; surface deposits of morainal and lacustrine materials are limited in their extent.

Alluvial materials are mostly over one metre thick and vary in particle size from sandy-skeletal to fine-clayey, with loamy-skeletal and fine-loamy classes being predominant. They comprise a series of terraces formed by deposition of materials transported by Cameron River. Toward Cameron Lake, the alluvial materials become gradually finer as the coarse fragments decrease and, in the proximity of Cameron Lake, they overlie compacted layers of lacustrine materials.

The colluvial materials are loam-skeletal with a high proportion of the coarse fragments being stones. On the lower slopes, the colluvial forms a blanket greater than one metre thick, whereas on the middle slopes it is less than one metre thick forming a veneer over bedrock or morainal materials. The colluvium is subject to creep (very slow, downslope movement), local wash and minor mass wasting. Occasionally, bedrock outcrops are found on the middle slopes among colluvial materials.

Water

Cameron River is the force of greatest influence in changing the park's landscape. Its many existing channels feed nutrients and silts through the floodplain. Former channels, still visible in the forested area, are evidence of past influences on soils and water distribution. In times of high water during the spring run-off, many of the old channels fill. In this way, they continue to contribute to the transport of water and to soil building within the floodplain.

The source of the Cameron River is Labour Day Lake, 24 kilometres southeast of Cameron lake. The river follows a generally northwesterly direction through a confined valley between McLaughlin Ridge on the west and Mount Moriarty and Mount Arrowsmith on the east. Yellow Creek, Cop Creek and Kammat Creek are significant tributary streams.

Industry has harvested large areas of old-growth forest in the Cameron River Valley. This activity has resulted in much lower interception of run-off, faster flooding and accelerated erosion channel development. In November, 1990, serious flooding occurred during a major winter rain storm which ravaged Vancouver Island.

Vegetation

Introduction

The old-growth Douglas-fir forest within Cathedral Grove makes MacMillan Park special in the BC Parks system. Only one other Provincial Park, Carmanah Pacific, is dedicated specifically to the protection of an old-growth forest.

Definition of Old-growth Forest

Professional foresters and scientists continue to debate a suitable definition for old-growth forest. Ministry of Forests inventory maps define old-growth forest as trees 30 metres or more in height and 150 years or more in age. The best definition, however, is probably a list of the features which separate an old-growth forest from second growth. These features include:

- Presence of a multi-layered canopy (uneven age structure);
- Great variation in tree sizes;
- High understorey patchiness;
- High understorey productivity;
- Abundance of old, large live trees;
- Abundance of large snags;
- Greater average tree spacing; and,
- High volume of woody debris (down logs).[2]

All the above features characterize MacMillan Park's forest.

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[2]Savard, Dr. Jean-Pierre L. Canadian Wildlife Service. Paper presented at the Ministry of Forests sponsored conference "Towards an Old Growth Strategy". Parksville. November 3-5, 1989.

Old-Growth Forest Context

Foresters and scientists still have incomplete knowledge about the extent and distribution of British Columbia's old-growth forest resources. Indeed, the Sierra Club of Canada and the Ministry of Forests recently launched two separate studies to determine the extent of the remaining old-growth forest in the province.[3]

On Vancouver Island only thirteen watersheds over 5000 hectares remain unlogged. Eight of these watersheds lie within Strathcona Provincial Park. The remainder are owned by Fletcher Challenge (TFL 46) and MacMillan Bloedel (TFL 44 and 46).

Table 2 on page 53 lists the major protected areas of old-growth forests in coastal British Columbia. The Provincial Parks and Ecological Reserves systems protects 135,900 hectares of old-growth forest.

MacMillan Park's place in the hierarchy of old-growth forest is as follows:

- The last and largest remaining area of old-growth forest on a major British Columbia highway. Thus, the park's old-growth forest is the most accessible and most visited by the public.

- One of three Class A Provincial Parks established specifically for the protection of forest values. The other parks include Carmanah Pacific and Arbutus Grove.

- MacMillan Park's old-growth forest is transitional between the east and west coasts of Vancouver Island. Thus, the park contains characteristics of both forest conditions and contains significant examples of old-growth Douglas-fir trees.

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[3]The Sierra Club is sponsoring a satellite image survey. The Ministry of Forests contracted J.M. Thompson Limited to do a survey of old-growth forest values.

Table 2. Major protected area of old-growth forests in British Columbia

Name and Location of Conservation Area	Total Area (ha)	Area Covered by Old Growth (ha)	% Covered by Old Growth	Represented Types (most to least extensive)
Strathcona PP[1], central Vancouver Island	201,003	47,600	24	HwBa[2],HwF,Hm,HmBa,Hw,CHw,HmCy,F,CF
South Moresby NP, south Queen Charlotte Islands	144,362	33,500	23	CHw,SsHw,Hw,Ss,CyC,HmCy,Hm
Tweedsmuir PP, Coast Mts. east of Bella Coola	57,500[3]	26,000	45	CF,HwBa,Hw,Hm,HmBl,HwF
Naikoon PP, northeast Queen Charlotte Islands	72,641	21,100	29	CHw,SsHw,Ss,C
Garibaldi PP, Coast Mts. north of Vancouver, B.C.	194,324	18,900	10	HwBa,HwF,HmBa,Hm,HmCy,CHw,CF,HmBl
Pacific Rim NP, southwest coast of Vancouver Island	27,325	16,200	59	CHw,HwBa,SsHw,Ss,C
Cape Scott PP, northwest tip of Vancouver Island	15,054	6400	42	CHw,SsHw,CyC,Ss
Golden Ears PP, Coast Mts. northeast of Vancouver	55,594	4000	7	HwBa,HmBa,CHw,HmCy,HwF,HmBl
Schoen Lake PP, northcentral Vancouver Island	8170	3500	43	HwBa,HwF,CF,CHw,HmBa,HmCy
Vladimir Krajina ER, northwest Queen Charlotte Islands	9834	2120	22	SsHw,CHw,Ss,CyC
East Redonda ER, northern Gulf of Georgia	6215	1350	22	HwF,HwBa,CHw,HmBa,F,CF,Hm
Manning PP, Cascade Mts. north of U.S. border	6000[4]	1150	19	CF,HwC,C
Mount Seymour PP, north of Vancouver, B.C	3058	600	22	HmBa,HwBa,CHw,HmCy,HwF
Gingietl Creek ER, lower Nass R. Valley, NW B.C.	2873	600	21	HwBa,Hw,SsHw,Ss,CHw,Cot,HmBl
All other provincial parks combined	22,973	1600	7	
All other ecological reserves combined (land area only)	7327	920	13	
Coastal British Columbia parks and reserves	834,253	185,600	22	CHw,HwBa,FHw,SsHw,CF,HmBa,Hw,Hm,Ss, CyC,HmCy,HmBl,F,C,Cot

[1] Abbreviations: PP = Provincial Park; NP = National Park; ER = Ecological Reserve

[2] Tree species symbols: Ba = amabilis fir (*Abies amabilis*); Bl = subalpine fir (*Abies lasiocarpa)*; C = western redcedar (*Thuja plicata*); Cot = black cottonwood (*Populus balsamifera ssp. trichocarpa*); Cy = yellow cedar (cypress) (*Chamaecyparis nootkatensis*); F = Douglas-fir (*Pseudotsuga menziesii*); Hm = mountain hemlock (*Tsuga mertensiana*); Hw = western hemlock (*Tsuga heterophylla*); Ss = Sitka spruce (*Picea sitchensis*)

[3] Coastal portion of park only (total size of Tweedsmuir Park: 896,658 ha)

[4] Coastal portion of park only (total size of Manning Park: 65,754 ha)

Source: Natural Area Journal. Vol. 8, No. 3. 1988:148.

• Little Qualicum Falls, Englishman River and Goldstream Provincial Parks contain scattered old-growth Douglas-fir trees. None of these stands, however, give the impression of an entire forest such as MacMillan Park provides.

• Strathcona Park (47,600 hectares) and Tweedsmuir Park (26,000 hectares) contain the largest quantity of old-growth forests in the BC Parks system. These trees are relatively inaccessible.

• Vladimir Krajina Ecological Reserve on the Queen Charlotte Islands contains the largest old-growth forest (2,120 hectares) in the Ecological Reserve system.

Forest Ecosystem

Trees are the most obvious element of a forest ecosystem, but for all their prominence, they are no more important than the other elements, each of which contributes to the existence of the plant community. For example, soil structure, its chemical composition together with water quality, macro and micro climates, is a vital element in the mix of ingredients which provide the conditions for plant growth. When all conditions are in the correct dynamic relationship, extraordinary growth results. MacMillan Provincial Park is one of these rare places. The forests here have reached their impressive size not only by having the correct conditions for growth, but also by being located on a wet valley floodplain, protected in part, from fire and severe coastal storms.

Plant Associations

Ten distinct plant associations have been identified within MacMillan Provincial Park. Table 3 lists each of these major associations. The Ecosystems of MacMillan Park exhibit a map of these associations and their relative recreation significance. Figure 2 shows the areas of highest recreational value based on species diversity, dominance of large trees and low shrub cover as well as the tallest and biggest trees.

Table 3. Plant Associations

Biogeocoenotic association	Biogeocoenotic type[1]
1. Sword Fern - Oregon Grape - (Broadleaf Maple) & Douglas-fir - Western Redcedar	11. Sword Fern - Oregon Grape - (Broadleaf Maple) & Douglas-fir - Western Redcedar on Loamy-Skeletal Orthic Dystric Brunisol with Mormoder on Colluvial Blanket 12. Sword Fern - Oregon Grape - (Broadleaf Maple) & Douglas-fir - Western Redcedar on Loamy-Skeletal Orthic Humo-Ferric Podzol, Mini Phase with Mormoder on Alluvial Terrace
2. Vanilla Leaf - Sword Fern - Douglas-fir Western Redcedar	21. Vanilla Leaf - Sword Fern - Douglas-fir - Western Redcedar on Loamy Skeletal Orthic Humo-Ferric Podzol, Mini or Sombric Phase with Mormoder on Colluvial Blanket 22. Vanilla Leaf - Sword Fern - Douglas-fir - Western Redcedar on Fine-Loamy Orthic Humo-Ferric Podzol, Sombric Phase, with Mormoder on Alluvial Terrace
3. Foamflower - Sword Fern - Douglas-fir - Grand Fir & Western Redcedar	31. Foamflower - Sword Fern - Douglas-fir - Grand fir and Western Redcedar on Loamy-Skeletal Orthic Humo-Ferric Podzol, Sombric Phase, with Vermimull on Alluvial Terrace 32. Foamflower - Sword Fern - Douglas-fir - Grand fir and Western Redcedar on Fine-Loamy Orthic Humo-Ferric Podzol, Sombric Phase, with Mormoder on Alluvial Terrace 33. Foamflower - Sword Fern - Douglas-fir - Grand fir and Western Redcedar on Fine-Loamy Orthic Humo-Ferric Podzol, Sombric Phase, with Vermimull on Alluvial Terrace
4. Maidenhair Fern - (Oak Fern) & Sword Fern Grand Fir & Western Redcedar	41. Maidenhair Fern - (Oak Fern) - Grand Fir & Western Redcedar on Loamy-Skeletal Sombric Humo-Ferric Podzol with Mullmoder on Colluvial Blanket 42. Maidenhair Fern - (Oak Fern) & Sword Fern - Grand Fir & Western Redcedar on Loamy-Skeletal Sombric Brunisol with Vermimull on Alluvial Terrace or Floodplain
5. Enchanter's Nightshade - Salmonberry- (Western Redcedar) - Broadleaf Maple & Red Alder	51. Enchanter's Nightshade - Salmonberry - (Western Redcedar) - Broadleaf Maple & Red Alder on Loamy-Skeletal Orthic Regosol on Alluvial Floodplain
6. Lady Fern - Devil's Club - (Grand Fir) & Western Redcedar	61. Lady Fern - Devil's Club - (Grand Fir) & Western Redcedar on Loamy-Skeletal Orthic Humic Regosol with Vermimull on Alluvial Floodplain
7. Lady Fern - Skunk Cabbage - Western Redcedar	71. Lady Fern - Skunk Cabbage - Western Redcedar on Fine-Clayey Sombric Humo-Ferric Podzo, Gleyed Phase with Vermimull on Alluvial/Lacustrine Terrace
8. Skunk Cabbage - Red-osier Dogwood - Western Redcedar & Red Alder[2]	
9. Meadow Horsetail - Slough Sedge - Red Alder - Pacific & Sitka Willow[2]	
10. Pacific Oenanthe - Sedge[2]	

[1] Associations may be divided into types based on properties that control soil moisture and nutrient regime.

[2] A tentative association, not adequately sampled and studied.

Source: Ecosystems of MacMillan Park on Vancouver Island

Wildlife

While no specific wildlife data exists for the park, we do know wildlife species characteristic of old-growth Douglas-fir forests.

Mammals

Since MacMillan Park is a relatively small area, large mammals would only use the park when travelling through their territories. Large mammal species found in this area include Blacktail deer, black bear, cougar and the Vancouver Island wolf. Several species of small mammals, however, likely depend on the park for their habitat. These include long-eared myotis bat, silver-haired bat, red squirrel, short-tailed weasel, mink and Townsend vole.

Birds

A variety of birds seek the old-growth forest as breeding habitat. A list of such birds includes Red-breasted sapsucker, downey woodpecker, hairy woodpecker, northern flicker, chestnut-backed chickadee, American robin, varied thrush, Steller's jay, brown creeper, Hammond's flycatcher and gold-crowned kinglet. An inventory of bird species will reveal rich bird fauna.

Amphibians and Reptiles

As scientists delve further into the complex old-growth forest ecosystem, more is understood about the often ignored amphibians and reptiles. The cool, moist environment of MacMillan Park provides habitat for the following amphibian and reptiles: Pacific Treefrog, Red-legged Frogs, Rough-skinned Newts, Northwestern salamander, western red-backed salamander, and the garter snake.

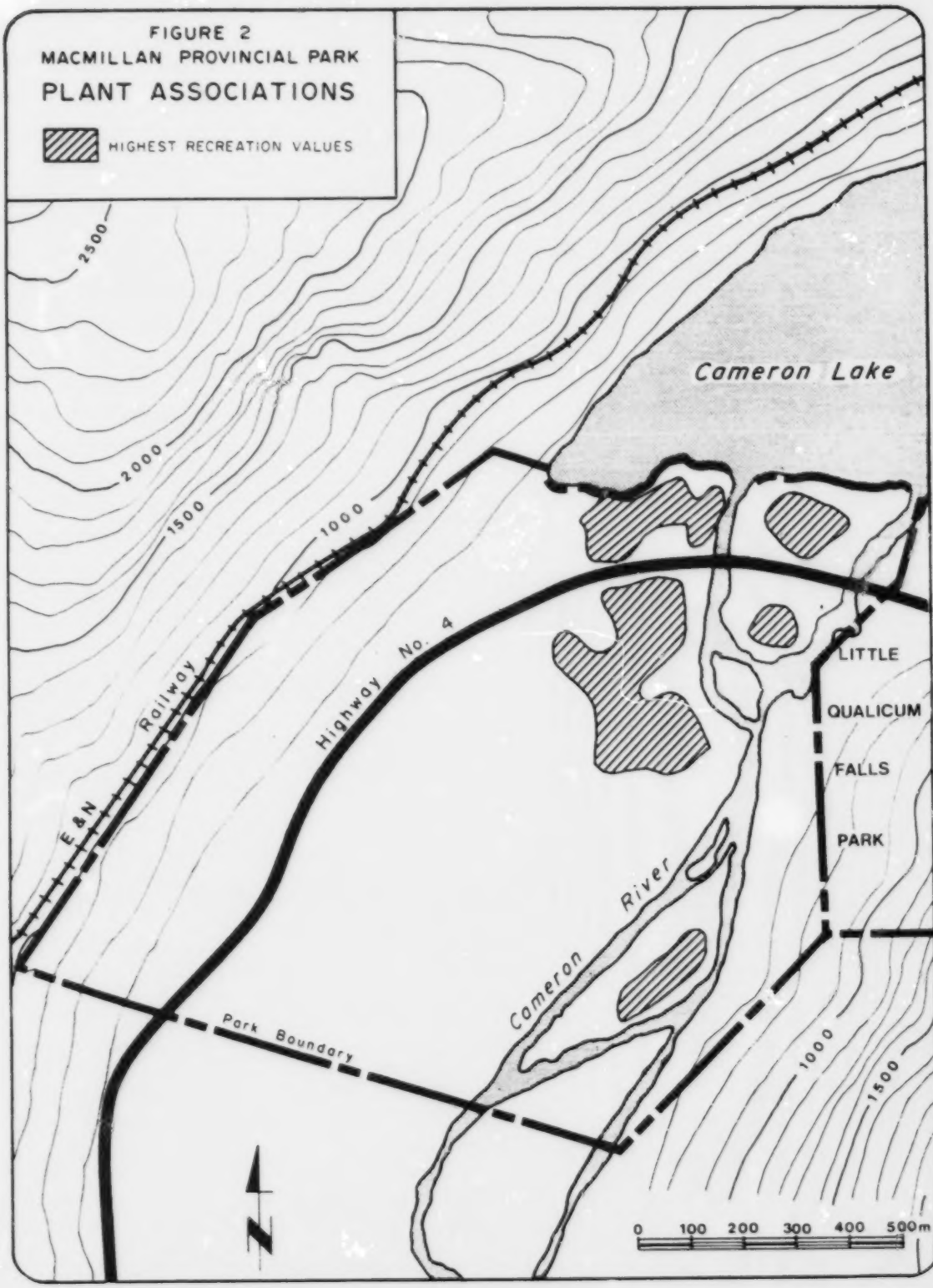
FIGURE 2
MACMILLAN PROVINCIAL PARK
PLANT ASSOCIATIONS
HIGHEST RECREATION VALUES
2500
2000
1500
1000
Cameron Lake
E&N Railway
Highway No. 4
LITTLE QUALICUM FALLS PARK
Cameron River
Park Boundary
N
0 100 200 300 400 500m

Insects

The incredible diversity of MacMillan Park's forest, particularly the existence of large snags and fallen trees, attracts a vast range of insect life. Scientists estimate some 300 species of insects are associated with a fallen, decomposing Douglas-fir.[4] These insects range from wood-chewing insects such as beetles, ants and termites to debris eaters like earthworms, mites and earwigs. The whole spectrum of insect life within an old-growth forest is probably the least understood aspect of wildlife within an old-growth forest ecosystem.

Fish

The portion of Cameron River in the park naturally supports a small Rainbow, Brown and Cutthroat trout fishery.

Visual Resources

MacMillan Provincial Park's visual resources are focused on intimate forest areas rather than on broad sweeping views of larger landscapes.

Three main categories of visual resources can be identified in the context of this park:

1) Visual impressions of Cathedral Grove related to the scale of man's development. This includes scale provided by provincial Highway 4, cars, buses and parking lot facilities inside the right-of-way and park facilities, signs, toilet buildings and trails within the park.

2) Visual impressions of the trees related to visitor use of the trails with scale provided by the internal structure of the forest, such as fallen logs, smaller trees, shrubs and ground cover plant species. These resources have the most potential for providing the visitor with feelings of reverence and awe of nature - the experience of Cathedral Grove.

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[4]Kennedy, Des. "Death of a Giant." Nature Canada. Spring, 1991. Vol. 20, No. 2. Page 21.

3) Visual resources associated with water bodies are integral with other park values. The impressions which visitors gain by walking the Cameron River Trail and by following the Cameron Lake Trail north of the highway are visual elements of the visitor experience.

Visual values are not so much expressed by the impressive size of single trees but, rather, are found in the collective impressions gained by seeing and feeling the presence of large trees in stands and in association with other smaller plants.

The trail system which conducts visitors through changing views of the forest, often of the same stands of large trees, is the vehicle for the visitor's experience. This visual "conduit" is the key to park values.

Cultural Resources

Little is known about Native people's use of the MacMillan Park area. A 1963 Provincial Museum survey of provincial parks found no significant archaeological values in MacMillan Park.

The Nootka-speaking Opetschesaht people of the Alberni Valley region are known to have travelled on lengthy hunting trips to the east coast of Vancouver Island. The Opetschesaht probably used the Cameron River Valley as one route to the east coast.[5] Similarly, the Pentlatch in the Courtenay area and the Nanaimo Native people to the south may also have ventured into the Cameron River Valley on hunting and food gathering forays.

European settlement began in the Alberni Valley during the 1860s. Pioneers continually sought a land link to the east coast of Vancouver Island. Work crews completed a wagon road in 1886 connecting the Alberni Valley and Nanaimo.[6] This

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[5]McMillan, Alan D. and Denis E. St. Claire. Alberni Prehistory. Alberni Valley Museum, Port Alberni, B.C., 1982, p.12

[6]Hines, Ben. Pick, Pan & Pack. Alberni Valley Museum, Alberni, 1976, p.10

rough road followed a course along the north shore of Cameron Lake.

The Canadian Pacific Railway surveyed a railroad line from Parksville to Alberni in the early 1900s. Construction started on August, 1908 and continued until the new railroad line opened December 20, 1911. Through mutual agreement between the Canadian Pacific Railway and the government, the wagon road was moved to the south side of Cameron Lake around 1910.[7] Portions of the old wagon road eventually became Highway 4. The remaining part of the road on the northwest side of Cameron Lake provides access to private cabins.

The railway and highway links between the Alberni Valley and Parksville afforded local citizens and tourists the opportunity to view the large old-growth forest in the Cameron River Valley. By the late 1920s, logging companies and developers had removed the last remaining easily accessible old-growth forest groves along the Malahat Drive, the Cowichan Lake road and in the Campbell River area. As a result, local boards of trade, outdoor groups, town councils and individual citizens vigorously sought provincial government action to protect the Cameron Valley forests as a tourist attraction.

The name "Cathedral Grove" appeared in correspondence to the provincial government at this time. This colourful description of the stately trees at the west end of Cameron Lake is reputed to have originated from the Governor General Viscount Willingdon in April, 1928.[8]

Over the next fifteen years, the public encouraged the provincial government to acquire substantial lands owned by the Victoria Lumber and Manufacturing Company within Block 35, Cameron lake area. Petitioners recommended parks ranging in size from 490 to 1200 hectares.

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[7]Letter from W. Prior, Chief Timber Ranger, B.C. Forest Service, to L.C. Lytton, Assistant Land Agent, May 16, 1946.

[8]Letter from Moel Money to A. Carmichael, dated April 30, 1929. Provincial Archives.

In 1944, H.R. MacMillan donated 136 hectares of forest, including the famous "Cathedral Grove," to the Province of British Columbia for park purposes. The provincial government established MacMillan Provincial Park in 1947.

In 1961, the Canadian Overseas Telecommunication Corporation constructed a cable system to the south Pacific which passes through the northwest side of the park between Highway 4 and the Esquimalt & Nanaimo Railway grade.

Analysis

Resource	Opportunities	Constraints
Climatic	Moderate temperatures promote year round use	None
Physiographic	Diversity of valley soils	Soil compaction can adversely affect health of stand
Water	Cameron River and Cameron Lake act as secondary foci	Stream erosion can affect stand
Vegetation	Plant associations provide variety of park opportunities	Any management actions must be directed at stand protection
Wildlife	Minor visibility of species	None
Cultural	Presentation of donor's contribution	None
Scenic	Vegetation and water resources contribute significantly	None

Tenures, Occupancy Rights and Jurisdictions

MacMillan Park

MacMillan Provincial Park (Figure 3) is bisected by Highway 4, a 100-foot highway right-of-way connecting Port Alberni with Highway 19 at Parksville. Two park use permits have been issued for communication purposes. There are no other alienations.

Adjacent Lands

Figure 4 shows the area over which a status of lands in the immediate vicinity of MacMillan Provincial Park and Little Qualicum Falls Park. BC Parks undertook this evaluation to understand the extent of private and public ownership in the lower Cameron River watershed. The long term viability of MacMillan Park is dependent on working with adjacent land owners to possibly acquire more land for park purposes as well as develop compatible land use strategies. Appendix 4 contains a complete list of the land status for adjacent lands.

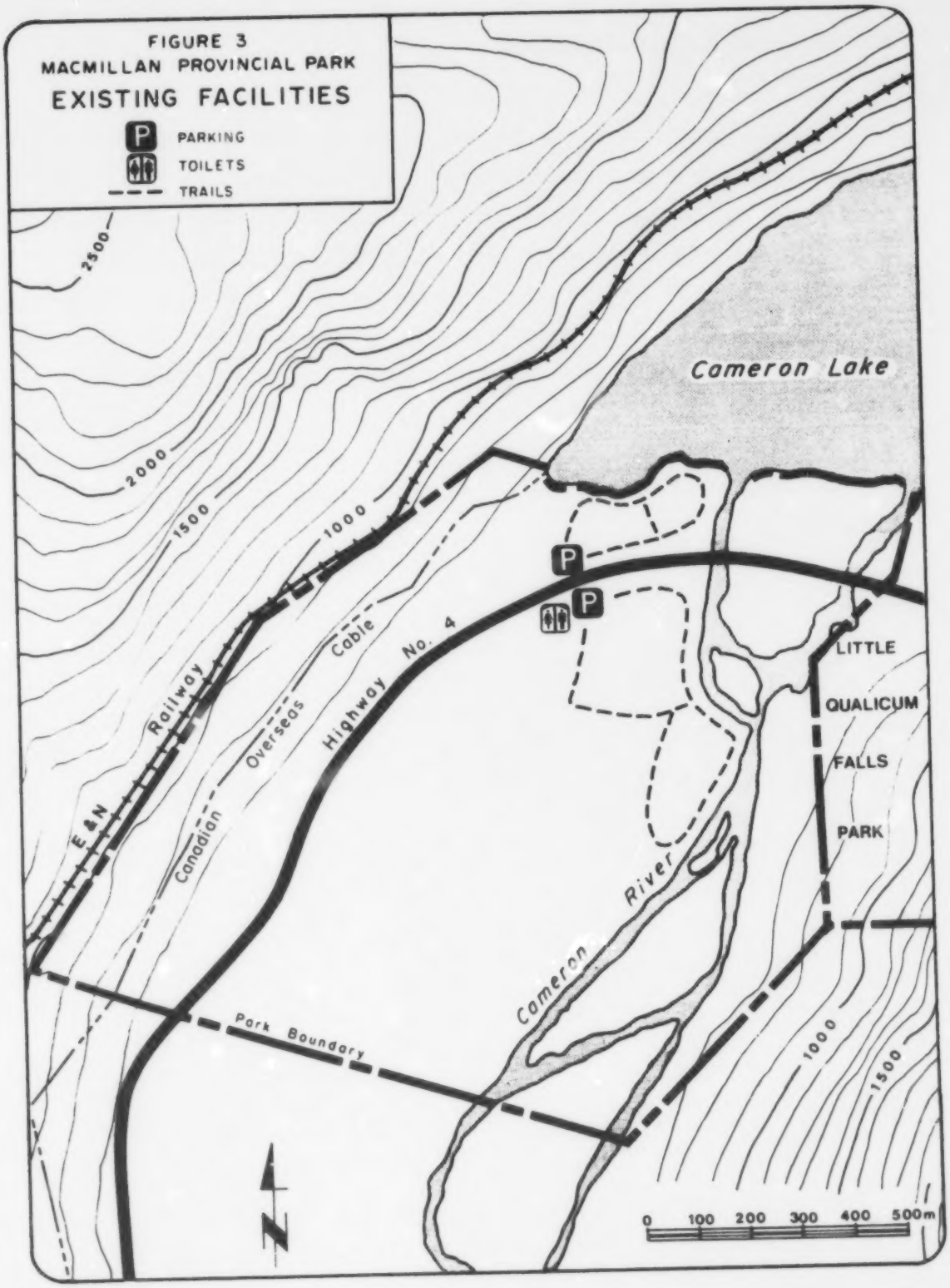


FIGURE 3
MACMILLAN PROVINCIAL PARK
EXISTING FACILITIES
PARKING
TOILETS
TRAILS
2500
2000
1500
1000
Cameron Lake
P
P
LITTLE
QUALICUM
FALLS
PARK
E&N
Railway
Canadian
Overseas
Cable
Highway
No. 4
Cameron
River
Park Boundary
1000
1500
N
0
100
200
300
400
500m

Recreation Opportunities

Although the park and its features are internationally significant, the existing park facilities are best described as primitive (Figure 3).

Parking occurs in an unorganized manner in two areas immediately adjacent to Highway 4. Two loop trails, providing a variety of walking times and leading past the largest species have been developed in the grove on both sides of the highway. Sanitary facilities consist of pit toilets and rudimentary information facilities associated with the parking areas point out features in the park.

Upgrading of all these facilities to reflect the significance of the park is necessary.

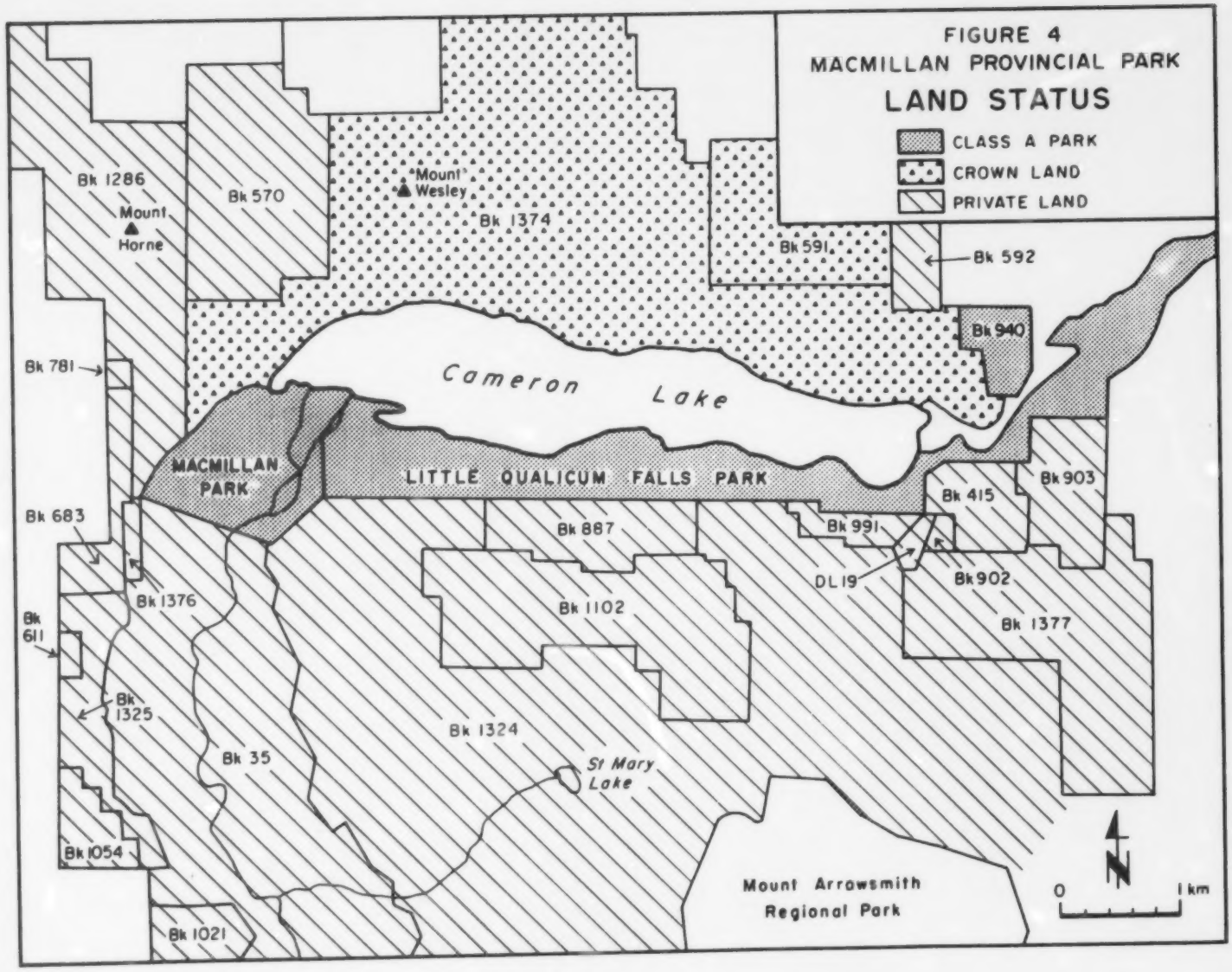


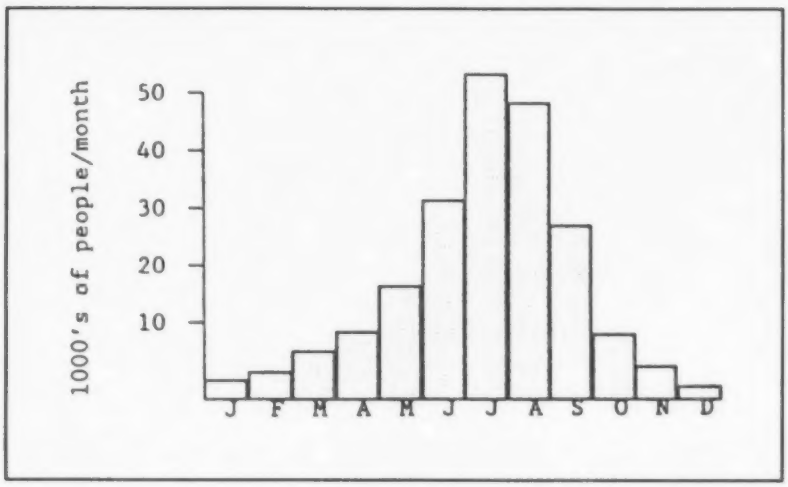
FIGURE 4
MACMILLAN PROVINCIAL PARK
LAND STATUS
CLASS A PARK
CROWN LAND
PRIVATE LAND
Bk 1286
Mount Horne
Bk 570
Mount Wesley
Bk 1374
Bk 591
Bk 592
Bk 940
Bk 781
Cameron Lake
MACMILLAN PARK
LITTLE QUALICUM FALLS PARK
Bk 903
Bk 415
Bk 683
Bk 887
Bk 991
K
DL 19
Bk 902
Bk 1376
Bk 1102
Bk 1377
Bk 611
Bk 1325
Bk 1324
St Mary Lake
Bk 35
Bk 1054
Mount Arrowsmith Regional Park
Bk 1021
N
0
1 km

Market Analysis

Existing Use

From data gathered from 1978 to 1989, use in MacMillan Provincial Park has approximated 250,000 persons annually. Of these, 220,000 walk the trails, while the remainder simply pull over to view the grove from the roadside or parking lots. Over 300,000 people visited the park in 1990.

TABLE 4 - USE PATTERN



Visitor Profile

Ninety-five percent of visitors arrive by private vehicle and five percent on charter or tour buses. The average party size is 3.1 persons, with the average length of stay being 30 minutes. Eighty percent of visitors walk the MacMillan Trail (south) and 20 percent walk the Cedar Loop Trail (north).

Vehicle origin is as follows:

British Columbia	66%
Alberta	16%
Ontario	8%
Quebec	2%
Manitoba	2%
Saskatchewan	2%
Other Canada	1%
United States	3%
	100%

The small percentage of visitation by Americans may be explained by a prevalence of large trees in Washington, Oregon and California (i.e. the Redwood/Sequoia attraction).

Visitor book analysis indicates many offshore visitors, particularly from European countries, arrive at the park with friends or relatives.

Supply

MacMillan Provincial Park's location in east-central Vancouver Island places it in an area well served by Provincial Parks. In the area extending from Parksville west to Sproat Lake, ten Provincial Parks protect natural and cultural values and provide a variety of outdoor recreation opportunities.

MacMillan Park protects and presents the special old-growth forest of Cathedral Grove. While many provincial parks on Vancouver Island have large trees, there is no other easily accessible stand of old growth forest that approaches the impressiveness of Cathedral Grove. The park also provides the public with swimming, hiking, nature appreciation and dayuse opportunities. Recreation facilities are limited to parking lots, trails, toilets and interpretive signs.

The other Provincial Parks close to MacMillan Park supply the visitor with a variety of facilities, recreation opportunities and natural and cultural features as follows:

Englishman River Park

- Location: 20 kilometres southeast of MacMillan Park.
- Facilities: 103 campsites, dayuse area, trails.
- Recreation: camping, hiking, picnicking, fishing, swimming.
- Natural features: botany, waterfalls, geology.

Little Qualicum Falls Park

- Location: next to MacMillan Park's east side.
- Facilities: 91 campsites, dayuse area, trails.
- Recreation: camping, hiking, picnicking, fishing, swimming.
- Natural features: botany, waterfalls, geology.

Horne Lake Caves Park

- Location: 10 kilometres north of MacMillan Park.
- Facilities: trails.
- Recreation: hiking, caving.
- Natural features: caves and cave features.

Spider Lake Park

- Location: 10 kilometres north of MacMillan Park.
- Facilities: Dayuse area, trails.
- Recreation: hiking, picnicking, swimming, boating, fishing.

- Natural features: glacial landforms.

Rathtrevor Beach Park

- Location: 30 kilometres east of MacMillan Park.
- Facilities: 174 campsites, large dayuse area, trails, visitor centre, sani-station, showers.
- Recreation: beach activities, picnicking, swimming, walk-in and vehicle access camping, hiking.
- Natural features: marine life, east coast forest, ecological changes, birds.
- Cultural features: Native people's fishing site, archaeological sites, pioneer farm.

Stamp Falls Park

- Location: 20 kilometres west of MacMillan Park.
- Facilities: 22 campsites, dayuse area, trails.
- Recreation: camping, picnicking, fishing, hiking, nature appreciation.
- Natural features: geology, waterfalls, botany, fish run.

Sproat Lake Park

- Location: 20 kilometres west of MacMillan Park.
- Facilities: 59 campsites, dayuse area, boat launch, trails, sani-station, showers.
- Recreation: camping, picnicking, fishing, hiking, boating and swimming.
- Natural features: lake shore environment.
- Cultural features: petroglyphs; pioneer logging.

Fossili Park

- Location: 23 kilometres west of MacMillan Park.
- Facilities: none
- Recreation: swimming, fishing, hiking
- Natural Features: mixed forest, beach, bog.

Taylor Arm Park

- Location: 30 kilometres west of MacMillan Park.
- Facilities: dayuse area, trails.
- Recreation: picnicking, swimming, fishing, boating and hiking.
- Natural features: lake shore environment.

Strathcona Park

- Location: 60 kilometres northwest of MacMillan Park.
- Facilities: 161 campsites, dayuse areas, boat launches, trails.
- Recreation: vehicle access and wilderness camping, picnicking, fishing, swimming, hiking, boating, nature appreciation.
- Natural features: geology, alpine, old-growth forest, large mammals, botany.
- Cultural features: Nootka fishing on the Moheya River; first Provincial Park; railroad logging.

Demand

MacMillan Provincial Park is an extremely important destination park for visitors to Vancouver Island. Daily during July and August, as many as 2,000 people may walk the trails and the present parking lots are full to capacity from 10:00 a.m. to nearly 4:00 p.m. One in every seven of the vehicles that passes through the park stops or pulls over.

Although the popularity of the park is most pronounced in the summer months, substantial use occurs throughout the year.

Use, however, has remained relatively constant even with increasing advertising of Pacific Rim National Park and promotion of the Parksville/ Qualicum area as a tourist destination area. Highway travel has declined in the last five years due to other influencing factors.

Planning Issues

BC Parks will assess and deal with the following key planning issues in the MacMillan Park Master Plan.

Role of the Park

MacMillan Park protects a small but spectacular old-growth Douglas-fir forest. The park's location next to a major highway permits easy public access. The park's contribution to the conservation goal is significant from a national and international perspective. The park's role as a major education and research focus will continue to grow.

Park Boundary

The viability of MacMillan Park requires careful assessment of the park's boundary. In the short term, lands to the south of the park are needed to permit the location of visitor services facilities and parking. In the long term, the entire lower Cameron River valley requires evaluation to determine rational land use management strategies which recognize and protect to integrity of MacMillan Park.

Natural and Cultural Resource Management

MacMillan Park's old-growth forest is a complex ecosystem. Visitor use of the park creates stress on this environment. Outside land use activities affect the park as well. The master plan will identify management objectives and actions to protect these resources.

Park Facility Development

The type, location and level of park development is an issue. The twin, conflicting objectives of the park, to protect and present the outstanding example of old growth forest, have resulted in the existing primitive facilities and unorganized parking area adjacent to Highway 4. The obvious reluctance to create a parking area and associated facilities in the stand because of the potential impact has created an unsafe access and egress situation along a 60 km/hour provincial highway.

Vegetation Management

Little is understood of old growth stand dynamics in this area. Consequently, various opinions on management actions, centring on soil, understorey and silvicultural enhancement, abound within the overall context of protecting the stand. The master plan will identify a management program for this resource.

Public Information and Education

MacMillan Park experiences relatively heavy public use. The old-growth forest and the park's strategic location provide an unprecedented opportunity for public education and information services. The master plan will outline a long term program.

Association with Surrounding Forest Company Land Use.

Logging operations affect lands next to the park's east, west and south boundary. These operations influence the park, particularly through stream runoff and landscape changes. The master plan will identify a program to work with forest companies for the protection of the park.

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Appendix 2

BC Parks System Goals

BC Parks System Goals

Under the Park Act, BC Parks must:

- conserve significant and representative natural and cultural resources, and
- provide a wide variety of outdoor recreation opportunities.

Conservation

Two goals define the BC Parks conservation mandate:

Goal 1 Protection of Representative Landscapes - To conserve British Columbia's natural diversity by protecting viable, representative examples of the province's different landscapes.

Goal 2 Protection of Special Features - To protect British Columbia's key natural and cultural features, including outstanding examples of the province's wildlife, old-growth forests, waterfalls and cultural artifacts.

Recreation

Four goals define the BC Parks recreation mandate:

Goal 1 Tourism Travel Routes - To provide Provincial Park attractions and services which enhance tourism travel routes.

Goal 2 Outdoor Recreation Holiday Destinations - To provide Provincial Park attractions which serve as or improve key destinations for outdoor recreation holidays.

Goal 3 Backcountry Recreation - To provide outstanding backcountry recreation opportunities throughout the province. Some sites may feature adventure tourism, while other areas the wilderness would remain untouched.

Goal 4 Local Recreation - To ensure access to local outdoor recreation opportunities for all residents of British Columbia.

Appendix 3

BC Parks Zoning

ZONING IN BC PARKS

	Intensive Recreation	Natural Environment
OBJECTIVE	To provide for a variety of readily accessible, facility-oriented outdoor recreation opportunities.	To protect scenic values and to provide for backcountry recreation opportunities in a largely undisturbed natural environment.
USE LEVEL	Relatively high density and long duration types of use.	Relatively low use but higher levels in association with nodes of activity or access.
MEANS OF ACCESS	All-weather public roads or other types of access where use levels are high (see "Impacts" below).	Mechanized (power-boats, snowmobiles, all terrain vehicles), non-mechanized (foot, horse, canoe, bicycle). Aircraft and motorboat access to drop-off and pickup points will be permitted.
LOCATION	Contiguous with all-weather roads and covering immediate areas, modified landscapes or other high-use areas.	Removed from all-weather roads but easily accessible on a day-use basis. Accessible by mechanized means such as boat or plane.
SIZE OF ZONE	Small; usually less than 2,000 ha.	Can range from small to large.
BOUNDARY DEFINITION	Includes areas of high facility development in concentrated areas.	Boundaries should consider limits of activity/facility areas relative to ecosystem characteristics and features.
RECREATION OPPORTUNITIES	Vehicle camping, picnicking, beach activities, power-boating, canoeing, kayaking, strolling, historic and nature appreciation, fishing, snowplay, downhill and cross-country skiing, snowshoeing, specialized activities.	Walk-in/boat-in camping, power-boating, hunting, canoeing, kayaking, backpacking, historic and nature appreciation, fishing, cross-country skiing, snowmobiling, river rafting, horseback riding, heli-skiing, heli-hiking, and specialized activities.

Special Feature	Wilderness Recreation	Wilderness Conservation
To protect and present significant natural or cultural resources, features or processes because of their special character, fragility and heritage values.	To protect a remote, undisturbed natural landscape and to provide backcountry recreation opportunities dependent on a pristine environment where air access may be permitted to designated sites.	To protect a remote, undisturbed natural landscape and to provide unassisted backcountry recreation opportunities dependent on a pristine environment where no motorized activities will be allowed.
Generally low.	Very low use, to provide solitary experiences and a wilderness atmosphere. Use may be controlled to protect the environment.	Very low use, to provide solitary experiences and a wilderness atmosphere. Use may be controlled to protect the environment.
Various; may require special access permit.	Non-mechanized; except may permit low frequency air access to designated sites; foot, canoe (horses may be permitted).	Non-mechanized (no air access); foot, canoe (horses may be permitted).
Determined by location of special resources; may be surrounded by or next to any of the other zones.	Remote; generally not visited on a day-use basis.	Remote; not easily visited on a day-use basis.
Small; usually less to 2000 hectares.	Large; greater than 5,000 ha.	Large; greater than 5,000 ha.
Area defined by biophysical characteristics or the nature and extent of cultural resources (adequate to afford protection).	Defined by ecosystem limits and geographic features. Boundaries will encompass areas of visitor interest for specific activities supported by air access. Will be designated under the Park Act.	Defined by ecosystem limits and geographic features. Will be designated under the Park Act.
Sight-seeing, historic and nature appreciation. May be subject to temporary closures or permanently restricted access.	Backpacking, canoeing, kayaking, river rafting, nature and historic appreciation, hunting, fishing, cross-country skiing, snowshoeing, horseback riding, specialized activities (eg. caving, climbing).	Backpacking, canoeing, kayaking, river rafting, nature and historic appreciation, fishing, cross-country skiing, snowshoeing, horseback riding, specialized activities (eg. caving, climbing).

	Intensive Recreation	Natural Environment
FACILITIES	May be intensely developed for user convenience. Campgrounds, landscaped picnic/play areas, trail, accommodation or interpretive buildings, boat launches; administrative buildings, service campgrounds, gravel pits, disposal sites, wood lots, parking lots, etc.	Moderately developed for user convenience. Trails, walk-in/boat-in campsites, shelters; accommodation buildings may be permitted; facilities for motorized access eg. docks, landing strips, fuel storage, etc.
IMPACTS ON NATURAL ENVIRONMENT	Includes natural resource features and phenomena in a primarily natural state but where human presence may be readily visible both through the existence of recreation facilities and of people using the zone. Includes areas of high facility development with significant impact on concentrated areas.	Area where human presence on the land is not normally visible, facility development limited to relatively small areas. Facilities are visually compatible with natural setting.
MANAGEMENT GUIDELINES	Oriented toward maintaining a high quality recreation experience. Intensive management of resource and/or control of visitor activities. Operational facilities designed for efficient operation while remaining unobtrusive to the park visitor.	Oriented to maintaining a natural environment and to providing a high quality recreation experience. Visitor access may be restricted to preserve the recreation experience or to limit impacts. Separation of less compatible recreational activities and transportation Designation of transportation modes may be necessary to avoid potential conflicts (eg. horse trails, cycle paths, hiking trails).
EXAMPLES OF ZONING	Campground in Rathtrevor Beach Park; Gibson Pass ski areas in E.C. Manning Park.	Core area in Cathedral Park; North beach in Naikoon Park.

Special Feature	Wilderness Recreation	Wilderness Conservation
Interpretive facilities only, resources are to be protected.	Minimal facility development. Limited development for user convenience and safety, and protection of the environment eg. trails, primitive campsites, etc. Some basic facilities at access nodes, eg. dock, primitive shelter, etc.	None.
None; resources to be maintained unimpaired.	Natural area generally free of evidence of modern human beings. Evidence of human presence is confined to specific facility sites. Facilities are visually compatible with natural setting.	Natural area generally free of evidence of modern human beings.
High level of management protection with ongoing monitoring. Oriented to maintaining resources and, where appropriate, a high quality recreational and interpretive experience. Active or passive management depending on size, location, and nature of the resource. Visitor access may be restricted to preserve the recreation experience and to limit impacts.	Oriented to protecting a pristine environment. Management actions are minimal and not evident. Managed to ensure low visitor use levels. Visitor access may be restricted to protect the natural environment and visitor experience.	Oriented to protecting a pristine environment. Management actions are minimal and not evident. Managed to ensure low visitor use levels. Visitor access may be restricted to protect the natural environment and visitor experience.
Tidepools in Botanical Beach Park; Sunshine Meadows in Mount Assiniboine Park.	Quanchus Mountains Wilderness in Tweedsmuir Park; Wilderness Zone in Spatsizi Park.	Central Valhallas Wilderness in Valhalla Park; Garibaldi Park Nature Conservancy area.

Appendix 4 - Adjacent Land Status

July 24, 1991

MACMILLAN PARK STATUS OF SURROUNDING AREA

Cameron District	Owner	Certificate of Title	Date
DL 19	George/Margaret Birkenhead	E3984	75/11/24
Blk 415	BC Forest Products	S112570	87/11/03
Blk 591	Crown Miscellaneous Land Use:- 1. RCMP - Licence of Occupation	L14707	82/04/01
Blk 592	Garnet/Emilia Fowler	ED14689	90/02/14
Blk 902	BC Forest Products	S112573	87/11/03
Blk 903	BC Forest Products	S112574	87/11/03
Blk 991	Kiyotaka Tsujimura	K23390	81/03/13
Blk 1377	Pacific Logging	C74535	74/07/11
Alberni District			
Blk 35 (Pl 691K) (part Pl 738R)	MacMillan Bloedel Crown (MacMillan Park)	J97763 36429N	80/10/04 45/07/19
Blk 84	MacMillan Bloedel subdivision	various	
Blk 189	MacMillan Bloedel	J97814	80/10/04
Blk 570	Texada Logging	M77722	83/08/22
Blk 611	MacMillan Bloedel	J75243	80/09/29
Blk 683	MacMillan Bloedel	J75203	80/09/30
Blk 781	Sandra Luckhurst	E43067	76/05/11
Blk 887	BC Forest Products	89295N	59/11/04
Blk 1021	MacMillan Bloedel	J99382	80/10/09
Blk 1054	MacMillan Bloedel	J99386	80/10/11
Blk 1102	BC Forest Products	89296N	59/11/04
Blk 1286	MacMillan Bloedel	A40127	72/04/06
Blk 1324 (L. 1, Pl. 28909)	MacMillan Bloedel Reg. Dist. Alberni-Clayoquot	C74349 N10338	87/11/06 84/02/20
Blk 1325 (Pl. 3036RW)	MacMillan Bloedel Esquimalt & Nanaimo Rlwy.	A42163 F48235	72/04/21 77/05/15
Blk 1374	Crown Note: Certificate of Title cancelled Miscellaneous Land Use: 1) UREP/Rec. Reserve 2) residential lots 3) northern portion - Vancouver Is. Plantations Forest	L14713	82/04/01 87/11/09
Blk 1376	Pacific Forest Products	K32916	81/04/23

Appendix 5 - Public Involvement Process

Public Involvement Process

The South Coast Regional Office prepared the master plan for the Strathcona District. Throughout the process of preparing the plan, many people from within and outside the Ministry of Environment, Lands and Parks supplied information, ideas and comments.

To ensure public review, BC Parks made the draft plan available in Vancouver and on Vancouver Island. In addition, BC Parks presented the master plan to the Alberni-Clayoquot Regional District Board of Directors and at two open houses in Parksville and Port Alberni.

BC Parks made adjustments to the master plan based on public comments.